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CHAMPIONSHIP ROAD RACE**

**TEST: MIGHTY MAICO 400**

**SUPERBOWL MOTOCROSS**

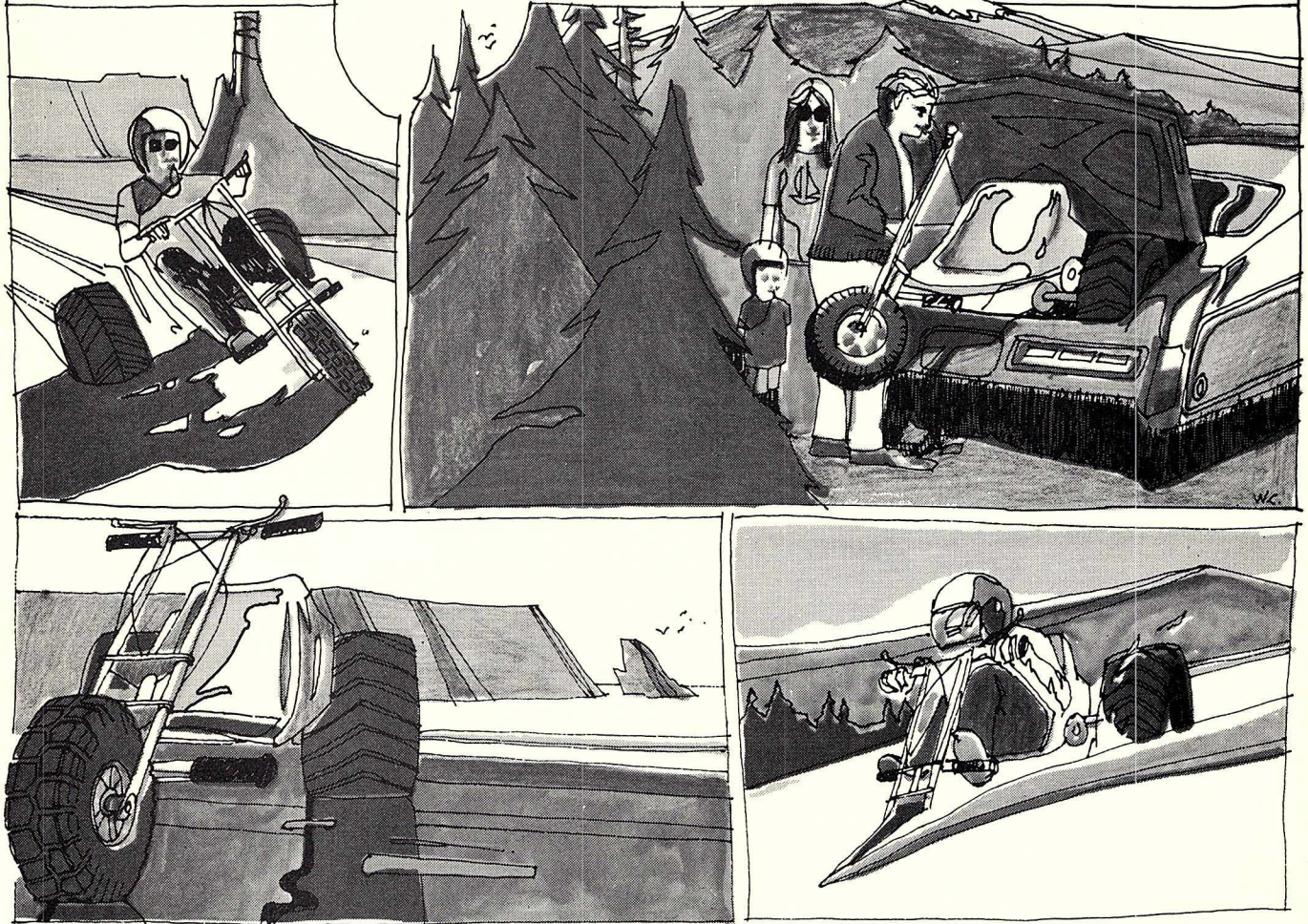
**TEST: SUZUKI'S MIDI-SIZED  
MUSCLE MACHINE**

**TECHNICAL: JUDSON'S ZAP  
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**TEST: TWO-STROKE VERSUS  
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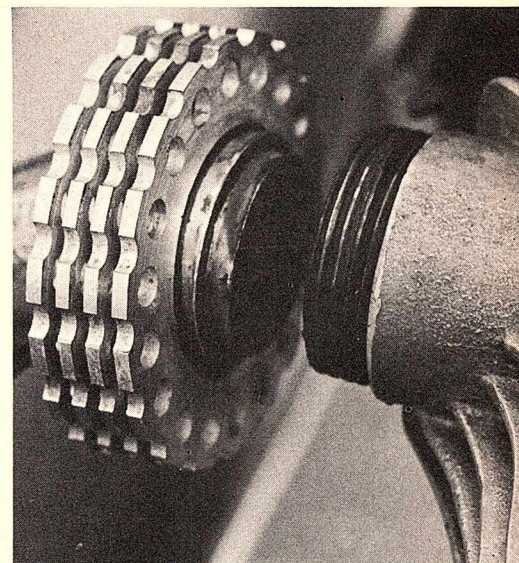


# MODERN CYCLE

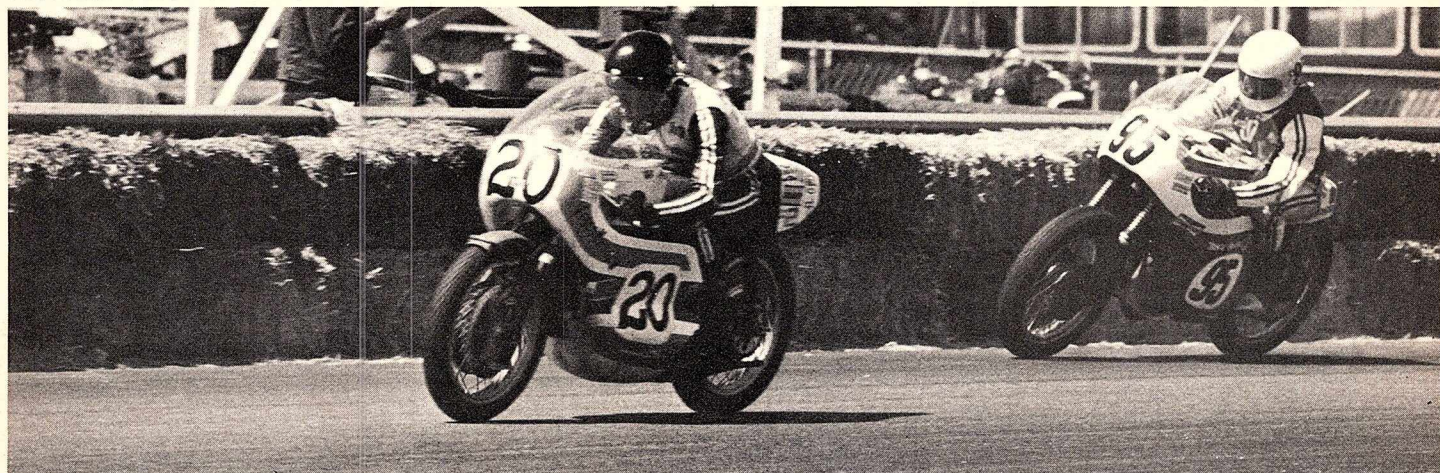
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# A BLAST FROM THE PUBLISHER

By Gordon Karrel

## ANOTHER SURVEY

The following information was contained in a press release recently issued by the University of Southern California.

The speed, range and noise of off-road vehicles—trail bikes, dune buggies, and snowmobiles—should be reduced if the character of our national forests is to be preserved.

"Contemporary off-road vehicles operating in the national forest use an overwhelmingly disproportionate share of this limited public resource," said Dr. E. Phillip Muntz, associate director of USC's Environmental Engineering Program. Muntz conducted a study recently with the help of two USC School of Engineering graduate students. He described the research as a preliminary effort designed to furnish a point of view on the complex and controversial question of off-road vehicle usage on public lands.

"Our study suggests that the national forests are a limited recreational re-

source that is unique only if the forests are maintained for public enjoyment in a condition approaching a natural state. Our point is that because the forests are limited, they must be used with the minimum disturbance that is consistent with a satisfying forest experience," Muntz said in a recent interview. He went on to explain that, "There is a delicate balance between close accessible areas and the 'back country.' Given the present character of national forests, hikers walk a certain distance to attain the relative isolation and quiet of land close to the natural state. However, with the proliferation of long range off-road vehicles, the hiker might walk for days and still be in the midst of crowds of motorcyclists. If we are to avoid this, thus maintaining the character of our national forests, either the impact of the vehicles must be reduced, or the forests would have to be expanded.

"If we opt for the latter, the trails would have to be lengthened by about a factor of five. Such a lengthening sug-

gests a required national forest area increased by a factor of twenty-five. Such an expansion is highly unlikely," Muntz said. The USC researcher said also that more research is needed, particularly into the best ways of providing trails for vehicles consistent with safety and ecological considerations, such as erosion and exhaust damage of vegetation. Effects of vehicle noise on other recreationists, and the concepts of an individual's "personal space" in the forests also should be investigated, he urged.

"We know at present, however, that the impact of an off-road vehicle is enormous compared to that of a hiker, primarily because of the vehicle's noise, range and speed," Muntz said in his interview. While it appears unacceptable to use off-road vehicles in their present configurations, Muntz noted that the vehicles do permit or induce many people to enjoy forest experience.

"One obvious approach, is to reduce the machines' forest impact to be equivalent to that of a hiker so the vehicles

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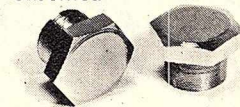
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can be used without an excessive disturbance to the forest. For those who primarily enjoy the speed and noise of off-road vehicles, limited areas could be set aside for this essentially gymnastic aspect of their use."

So much for another research study. I am forced to wonder if the learned and opinionated Mr. Muntz has ever actually been in a national forest in which off-road trail bikes were in use. Personal experience has led me to believe that motorcyclists visit the national forests for the same reason that the other folks do; to get away from it all and to enjoy nature. The riders that I have watched in national forests seldom ride in "packs" and their machines are invariably very well muffled.

Mr. Muntz suggests that the trail machines be designed so that it cause no more impact on the forest than that created by the average hiker. I maintain that a properly equipped bike which is properly ridden makes little more impact on the forest than that created by the average hiker.

#### NEW FACE

Webco, Incorporated recently announced the appointment of Winston Beaumont as advertising manager.

Beaumont began his advertising career 15 years ago as an artist-copywriter. He has since worked in a variety of fields including a five-year stint as a self-employed writer-photographer. He has been a publisher and a frequent cartoon contributor to a wide variety of motorcycle publications. Immediately prior to his joining Webco, he was a technical publication editor for Lockheed Aircraft Corporation in Burbank, California.

Married with five children, Beaumont lives in the small mountain community of Wrightwood, California. He spends many weekends on the Mojave desert motorcycle riding with members of his family.

#### GOOD PR

The Institute for Environmental Safety at the University of Montevallo in Montevallo, Alabama, is presently conducting a unique motorcycle drivers education course. It is aimed at instructing drivers education teachers in the proper methods of motorcycle operation and safety. The instructors then go out to teach motorcycle drivers education at the high school level.

Recently, Harley-Davidson supplied the Institute with eight new motorcycles for use in the curriculum. They consisted of two 65cc Leggeros, two 125cc Rapidos, two 350cc Sprints, one 1200cc Super Glide, and one 1200cc Electra Glide. All the motorcycles were set up and delivered by the Montgomery Harley-Davidson dealer Dan Myers.

Myers will also provide servicing for the vehicles.

The drivers education course is part of a federal project funded by the National Highway Safety Act of 1966. In the course, teachers are acquainted with various aspects of motorcycle safety, such as proper riding apparel, functions of the controls, capabilities and limitations of the motorcycle, rider control, road hazards, rules of the road, and night riding. The course intends to familiarize teachers with the motorcycle and its operation. Teachers receive five hours of riding per week as part of their instruction.

Teachers from all over the country, particularly Southeast, are attending. Last year, 220 drivers education teachers were graduated. This year, the Institute expects approximately 400 graduates from the five-week course.

The Institute also instructs motorcycle police officers in the fundamentals of riding as well as conducting a driver education class for surrounding area secondary schools. The Institute for Environmental Safety hopes, by instructing teachers in all aspects of motorcycling, to ultimately bring the novice rider and his motorcycle into the total driving environment. ●

# THE NEW SHERPA T 350

Bultaco has always set the trend in the trials world so when we say it's time to make a change...you'd better believe it! When we first made a 250 two-stroker, for example, the "experts" laughed and told us that a trials bike just HAD to be a four-stroke "thumper". How many of those thumpers do you see these days? Now we're getting back to the thumper-type power, however, with our latest Sherpa 'T' 350. But we're combining that sort of power with the light weight and precise steering of our famed 250. That's why we say it's time to change from the two-fifties. Because our new 350 does anything that the two-fifties can...and does it a whole lot better!



# BULTACO

Silverado, California



The revolutionary German Wankel rotary no-piston engine has been taken up by several automobile manufacturers and, in fact, several models are in production. However, till now only Japanese Suzuki and German Sachs motorcycle manufacturers have displayed enough foresight to lay down the considerable license to manufacture fee demanded by the owners of the invention . . . N.S.U., Audi and Wankel. Now the cash-starved British B.S.A. had taken out a license to manufacture, but any hopes of near-future Wankel engined two-wheelers can be dispelled when it is realized that Sachs have been working three years on a cycle unit without any production on offer. The principle of operation of the Wankel is well suited to our use, but designing a unit to fit within the limited frame space of a motorcycle has yet to be worked out. Kawasaki are the next firm likely to be involved, and the resources of the aforementioned giants of the industry will be in fierce competition to produce the first production model.



**This is the new 125cc Montesa Cota trials bike. Young Alan Ward depicted in action is a 12-year-old and rides trials and motocross.**

With his win in the 500cc Belgium Grand Prix, M.V.'s Agostini won his 11th World Road Race Championship and has every chance of taking the 350 title before the end of August.

For many years the sidecar version of World Championship Motocross has been the almost exclusive preserve of the British, but 1972 has seen the emergence of the European Mainland exponents of this art take over the lead having at last taken a leaf out of the book of their former conquerors. As no manufacturer markets a sidecar outfit for motocross and, in fact, for any form of racing, it has been left to the privateer to evolve a winning formula. The greatest development has been in fabricating a front fork which would take the enormous side stresses involved (even the best of the telescopic forks such as Ceriani). So preeminent

# EUROPE

on solos were useless, so riders designed by trial and error a form of leading link layout which in strutted and strengthened form may be likened to the former and popular Greeves own make and designed forks. Then as so often in the past, the small specialist firm produces the right packet for the job. (Remember the featherbed Norton frame, the first swinging arm, the first application of twin leading brake shoes followed by the disc-operated front



brake, the 5-speed cog box, etc?) This racing motocross outfit was the work of one who goes through life with the intriguing name of Robin Rhind-Tutt and produces his Wasp outfits where the passenger chassis is welded up with the bike frame as one unit, not the old fashioned bolt-on job. Well, the British sidecar boys cottoned onto this desirable device and powered the plot with home-tuned variants of that maid of all work Triumph 500cc or 650cc engine. Much gold was brought home with these, and in due course the continentals made their tracks to the home of Wasp in Salisbury, Wiltshire, England, where their gold was exchanged for the much desired Wasp. Now they had as good as the English boys but they wanted better. Realizing that Triumph does not sell engines alone, they cast around for a more formidable and easily obtained power plant, and this did not take much seeking as within easy reach of the Wasp factory was the Norton Villiers plant who are very pleased to sell engines in any good cause. Thus, in the British round of the sidecar World Championship Series the results (machine wise) read: 1st 750cc Norton-Wasp, 2nd 750cc Honda-Wasp, 3rd 750cc Norton-Wasp, 4th 750cc Norton-Wasp, 5th 750cc Norton-Wasp, 6th 750cc Triumph-Wasp, 7th 750cc Norton-Wasp, 8th 750cc Norton-Wasp, and 9th 750cc Triumph-Wasp. Whilst there is shown some slight engine variations, the Wasp chassis made a clean sweep!

The first four placement were Lubbers from Holland, Haller—Switzer-

land, Ten-Thye—Holland, and Van Heugten—Holland.

The latest trials bike from Spain is the 125cc Montesa Cota. It has an impressive performance, and on first glance at the engine little difference from its bigger brother, the 250cc, is apparent. The heavy flywheels so necessary for low down pulling are there, and with a six-speed cog box there is a gear for every condition. On test, no hills were encountered which could not be mastered and the weight of the whole package with gas, ready to ride, was a checked-out 168 pounds. Another virtue for the short-limbed or Junior was the low seat position which has resulted in sales to this section of riders. This Montesa, we would guess, will eat into the sales of the 250 Cota. After lengthy test, the only fault was the flimsy plastic chain top guard which shattered at an early date and was repeated on other 125 Cotas; an alloy replacement somewhat extended below the bottom run of the chain provided an easy answer. That this new Montesa is no toy was proved when Gordon Farley, the Number One Montesa factory rider, won first time out against an entry of 150 other trials riders.

Farley was chosen as one of the six British Trophy teamsters in this year's International Six Days Trial in Czechoslovakia, the others being Arthur Browning — Bultaco, Malcolm Rathmell—Bultaco, Jim Sandiford—Bultaco, Mick Andrews—Ossa, and John Pease on the big 504cc Cheney-Triumph. This year the choice of machines is wisely related to the factory commitments of the riders concerned whereas last year a batch of Cheney-Triumphs was the official "gear" with the result that some of the top riders were contract-tied to other makes.

The Germans, in their quest for anti-pollution controls, have turned their attention to the high octane rated fuels although the original demand for lead-free gas came from the States where the compulsory exhaust after burners designed to clean up exhaust emission required a fuel containing less lead which is, of course, the additive introduced as an anti-knock ingredient. The Germans have banned production of 100 octane gas which in Europe is recognized at the filling pumps by its 5 star grading; lower down the scale is the mostly used 4 star 97 to 99 octane. British bikes affected with big high compression motors are the Nor-

Text continued on page 26



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the Wombat, Hodaka's new 125cc Enduro and ISDT contender.

If you're not yet a Hodaka owner, send for your copy of the "Hodaka Story". Include your name, address, and zip code, along with 25 cents to PABATCO, 1172 Upper Sherman Road, Athena, Oregon 97813. We'll also send you the address of your nearest Hodaka dealer. Canadian readers should write to Gemini Ind. Ltd., 2525 Stephens Street., Vancouver, B.C. Australian inquiries can be sent to Minilya Pty., Ltd., P. O. Box 209, S. Melbourne, Australia 3205. Hodaka is designed and imported by PABATCO, Athena, Oregon 97813.



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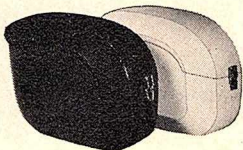
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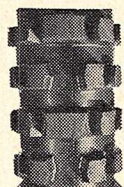
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Dear Sirs:

I am looking for any information you may be able to provide pertaining to small trail bike racing for Novices, such as various trials and trails events held in New England.

I am also an avid spectator and would appreciate your sending me a schedule of any professional events held in the same area. I would like to add that I have been reading **Modern Cycle** for two years now and enjoy it very much. Keep up the good work.

Eric LePine  
So. Hadley, Mass.

Information on what's happening in the New England area can be obtained by stopping by your local bike shop and picking up a copy of **Cycle Sport Magazine**. You can obtain a free sample copy by sending 25¢ to, **Cycle Sport**, 29 Burley Street, Danvers, Massachusetts 01932.—Ed.

Dear Sir:

I really dig your mag and I was wondering what you thought about the Suzuki 185?

Keith Ray

It's a very good motorcycle!—Ed.

Gentlemen:

I have recently become the proud owner of a 1946 Indian motorcycle. The problem is that it needs a few parts and some work done on it. I would be very grateful if you could give me the address of someone or some company that would have either parts or a shop manual for a 1946 Indian. The shop manual is most desperately needed!

John J. Vibanov

Information on the Indian motorcycle can be obtained by writing to, **Sammy Pierce**, 933 South San Gabriel Blvd., San Gabriel, California.—Ed.

Dear Sirs:

I am considering purchasing a Su-

zuki TS250J Savage. I would like to know if you have run an article on the machine in the past or if you plan to in the near future. If there are any other comments or opinions you have about the Savage, I would appreciate it if you would pass them on to me. I value your articles highly because they give a person great insight into the quality of the many cycles on the market today.

Michael Richmond  
Avon Park, Florida

It's been just about a year since we tested the **Suzuki Savage**. At that time, editor **Dave Ekins** put over one thousand miles on the machine in two consecutive weekends. On the first weekend **Dave** pre-ran the **Baja 500** course. The following weekend he competed on the bike in the 500-mile **Greenhorn Enduro**. At no time did the bike encounter any problems. Because of this, we feel that it is one of the better enduro-type machines available.—Ed.

Dear Sirs:

I need some information and I was hoping that you could help me. I need the address of the firm that purchased the old **Van Tech** firm. I believe it was purchased in the last year or two.

I need a kit they used to make. It is for my 1971 **Yamaha CY-1C 175 Enduro**. An article in the April, 1972 issue of **Modern Cycle** on page 90 showed a **Van Tech** floating backing plate designed for the **AT-1** which would make the rear brake full floating. This would improve rear braking and if it would fit my bike I am interested in purchasing one.

Doug Law  
Grandview, Washington

I believe that most of the assets of the **Van Tech** firm were purchased by the **Suzuki Fun Center** in **Burbank**. You can contact them by writing to, **Suzuki Fun Center**, 515 North Victory Blvd., **Burbank, Calif. 91502**.—Ed.

(Text continued on page 10)



# Motorcycle Theft On Increase

## MORE THAN 400 CYCLES STOLEN EVERY DAY

**M**otorcycle theft, always a problem, is increasing rapidly. Industry statistics show that almost 140,000 cycles were stolen last year and expectations are that an average of more than 400 cycles per day will be stolen in 1972.

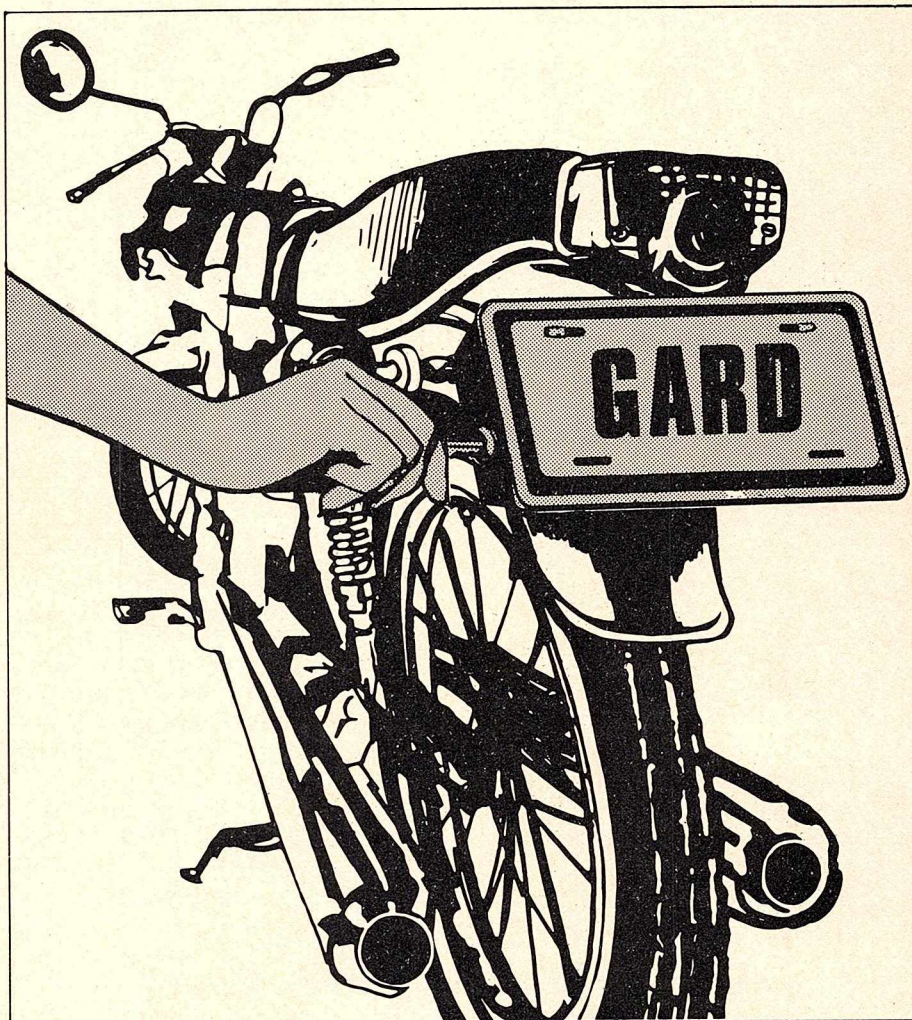
Unfortunately, the recovery rate on stolen cycles is almost nil. Cycle thieves are seldom sought and almost never caught. Yes, most cycles are insured against theft, but owners never get back anywhere near what they paid for their cycles. Further, they have to wait 30 to 60 days for any settlement at all and the season is half over before they can get a new bike. To make matters worse, most cycles are stolen within the first 120 days and the bigger the cycle, the more likely it is to be stolen.

To combat theft, many cycle owners buy heavy chains. But chains are so inconvenient they are often left at home. And chains can easily be defeated by prepared thieves.

### CYCLE-GARD PROVIDES EXCELLENT PROTECTION

People often say that if a professional thief really wants your cycle nothing can stop him. Fortunately this is no longer true. The new Cycle-Gard, made by Alcotronics is an effective deterrent, even for the pro. Cycle-Gard 2 sounds an ear-splitting alarm the instant anyone touches your cycle. At the same time, it notifies you of the danger via an alarm signal on a tiny receiver you carry in your pocket wherever you go. This electronic surveillance system keeps you in constant communication with your cycle.

Cycle-Gards are virtually impossible to defeat. There is no way to remove the Gard without the key, which only you carry. The lock is pick resistant. The case is made of Cycloc T. This space-age material is much stronger than steel. Used



on the nose cones of space vehicles and for timber splitting wedges, it can withstand tremendous impact.

Cycle-Gard is made with an elaborate baffle system which makes it impossible to dampen the sound with whipped cream or short it out with salt water. It is actually a dual alarm system with two separate motion sensing silicon activated mercury switches, separate long-life batteries and separate alarms, for extra safety.

If the Cycle-Gard is attacked with an axe, crowbar, screwdriver or pliers, it goes off instantly. The sound of an alarm panics amateurs. Pros are cooler, but no thief wants to go riding through the streets with an

alarm blasting. The pro simply abandons the protected cycle and looks for easier pickings. The FBI reports that alarms are effective in thwarting nine out of ten robbery attempts.

Statistics prove that Cycle-Gard really works. Less than one hundredth of one percent of cycle-Gard protected cycles have been reported stolen, compared with over 20% anticipated by insurance companies for unprotected cycles. Cycle-Gard is so effective it will probably qualify you for a reduction in insurance premiums. For more information, visit your dealer or write:

Security Products Division of  
**ALCOTRONICS**  
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# MAIL

Dear Sirs:

I would like some information on the "Time Machine" body design that was one of several featured in the June issue of **Modern Cycle**.

I have a Honda, model CL-350, 1972-K4. Could this body style be used effectively, and what complications might be entailed? I would like the price and any other information that you think may be helpful to me.

Fred Weekley  
Spring Lake, No. Carolina

**Complete information on the "Time Machine," as well as other products designed by The Fiberglas Works, can be obtained by writing to, The Fiberglas Works, 2600 Soquel Avenue, Santa Cruz, California.—Ed.**

Dear Sirs:

I have never had to write to a magazine before, but now I have to. It seems I have a problem, my parents just can't understand that I'm too big for my Suzuki 90. I weigh 140 pounds, I'm 5'8", and I'm 15 years old. I've been riding bikes for 6 years. I've had 5 bikes before and now my 90 is a little small. Now I want a Suzuki 185 Sierra, so how do I go about it?

Rourke Hembree  
Twain Harte, Calif.

**Considering your age, size and the amount of experience you've had I'd say that there is absolutely nothing wrong with your choice of this Suzuki as a machine to move up to.—Ed.**

Dear Sirs:

I just received your June, 1972 issue. I'm very unhappy with your test on the Harley-Davidson Super Glide. Your bike topped out at 115 mph. What did you do to it?? My Super Glide is completely stock except for the tach and accurately calibrated 160 mph speedometer.

I was messing around one day last week and I topped out my bike. I was going so fast the speedometer broke! Please find out what happened to your test bike.

Phil  
Salinas, Calif.

**You're not trying to get me to believe that you actually turned 160 miles per hour on your H-D? If you attempted to get anywhere near that speed while riding on the public streets you ought to have your head examined!—Ed.**

Sirs:

I write this letter in response to all the bad publicity that the Elsinore Grand Prix received. Certain groups hold the riders responsible for the actions of the spectators, i.e. the drunken brawls, vandalism, etc. What stupidity! When a riot starts in a soccer stadium, do people blame the players? Of course not.

Dave Farrell  
Arcadia, Calif.

**RIGHT ON!!!!—Ed.**

Sir:

I'm very interested in racing but I don't know how to get into it. I'm not new around bikes, but racing is a whole new thing. I would appreciate any information on how to get into it and any specifications for dirt track racing. Also, could you do an article on dirt track bikes and/or racing?

Wayne Hansen  
Midland Park, New Jersey

**You'll learn a lot more than I can teach you by going out to a moto track and asking the racers how they got into the sport.**

**We frequently do articles on dirt track bikes and on dirt racing. Keep watching, I'm sure you'll be happy with what you find.—Ed.**

Dear Sirs:

I have just started reading your magazine and I like it so far. I wish you would do a comparison test on all the 100 MX's. What do you think of the Bridgestone 100-TMX?

Jeff Tompkins  
Stone Mtn., Georgia

**A comparison test on all of the 100cc motocross machines on the market would fill a volume.**

**I can't give you an opinion on the Bridgestone since I've never seen one of the things.—Ed.**

Dear Sir:

I am 17 years of age and I go to nearly every enduro race held around Pemberton. I was wondering if you can tell me how I can go about getting an AMA license, and the nearest place I can go to get it.

James Varney  
Pemberton, New Jersey

**First comes membership in the AMA, then comes a competition card issued by your local AMA District. You can get things started by writing to the American Motorcycle Association, P. O. Box 141, Westerville, Ohio 43081.—Ed.**



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**CYCLE NEWS**

Circ H-5

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Long Beach, Ca 90801

# NUTS AND BOLTS

Dear Sirs:

I wonder if you could aid a disheartened owner of a 1971 Yamaha 350 street bike. The bike runs fine at any speed below 50 mph. At that speed, however, it refuses to accelerate and acts as if it is running out of gas. This happens during the day (at 110 degrees), and when it is cool at night. There are 3,000 miles on the bike. My brother, who knows quite a lot about motorcycles, has raised the possibility that seizure may be occurring. I would greatly appreciate any suggestions that you could offer.

Mike Will  
Tempe, Arizona

*I doubt if you're having any seizure problems. I think possibly a pair of NGK #9 heat range spark plugs would solve your problem.*

Dear Dave:

In the May issue you did a test on the Honda XL-250. In the last paragraph you said the engine was capable of producing 30 horsepower with not too many modifications. What would these modifications be? How would the modifications affect the torque the bike produces? And how would these modifications affect the reliability of the machine? Your information will be greatly appreciated.

Dave Henson  
Fallon, Nevada

*Just keep reading Modern Cycle and you'll get all this information.*

Dear Sirs:

I read with interest your articles on the Suzuki Savage hop-up and I'm considering it myself, but I have some questions I hope you can answer. First, the expansion chamber seemed to be rather long, and if a silencer was fitted to it wouldn't it protrude too much? Also, I use my bike 75% racing and 25% woods riding so would the conversion seriously affect the reliability of the engine? Your help will greatly be appreciated and I enjoy your magazine every month.

Bob Moose  
Lansboro, Mass.

*We have about 30 hours on this machine now and it hasn't failed yet. At this time we are using the Suzuki fitted with a stock muffler system, and although easier on the ear drums, we*

*haven't felt any noticeable difference in performance. In fact, I think it runs better with the old Savage muffler.*

Dear Sirs:

I own a 1972 Yamaha 250 MX. I am having trouble on accelerating at low rpm's. The machine wants to miss somewhat until it finally reaches about 7,000. What is your opinion on this? Could it be out of time, plugs, or carburetion? Also, I use NGK (B-9EN) type plugs and would like to know its reference to Champion. (Type and best suited heat range.) Is the heat range of the plug dependent on how hard a person runs his machine and what air temperature of the day is? I would appreciate any possible information.

John McQuown  
Ramey, Pennsylvania

*Recommended heat ranges of spark plugs are for general application, if you're running your bike hard most of the time then installing a spark plug one heat range colder is usually good practice. Your problem does sound like a spark plug and I would suggest a Bosch Platinum, expensive, but worth it because it will probably last the lifetime of your Yamaha.*

Dear Dave:

I have just read the article in the July issue of *Modern Cycle* on the Kawasaki blow up, and it gave me an idea to blow up my Bultaco 125 Pursang to a 250. I was wondering if I could take the cylinder head, cylinder, piston, and rings from the 250 Pursang and make my 125 into a 250, because both the 250 and the 125 have a stroke of 60. Your answer will be greatly appreciated.

Fred Bartlett  
Bakersfield, California

*Sure, you can make it a 175, 200, or 250, they all have the same stroke. Cylinders, piston, exhaust pipe, carburetor, and cylinder head are different though.*

Dear Sir:

I own a 1969 TS250 which I am setting up for motocross, but my forks are too soft and sag quite a bit. In your April, 1972 issue, you installed longer fork springs in your 250 racer, could they be used for my bike's forks? Or how about the booster springs for a Yamaha DT-1?

Also, would the low chamber/muffler on Suzuki's new 250 MX work on my bike? (I have a hop-up kit.) If not, where can I get a low chamber for my bike?

Thomas Flagge  
Branford, Conn.

*The low chamber from the Savage hop-up kit will fit your chassis, as will the fork spring kit also available from Suzuki. However, I didn't like the action of their forks and believe you should find some Betors or Ceriani units.*

Text continued on page 76



Wouldn't you agree that it's a bit of a mind boggler to conceive of a 16-year-old American kid holding his own against some of Europe's finest motocross talent? After all, Europeans invented the sport, and until last year, their dominance has been so complete that American riders were, to be as kind as possible, not in the same ball game. But, as everyone knows, Americans have demonstrated continued improvement during the seven or so years since the introduction of the sport in this country.

Nevertheless—even considering that



**MAYBE NEXT YEAR THEY'LL HAVE CHEERLEADERS**

# SUPERBOWL

American riders have in fact improved tremendously—wouldn't you agree that it's sheer fantasy at best to envision a 16-year-old American kid actually *beating* those aforementioned top European motocross riders and actually *lapping* a few of those highly touted aces in the process?

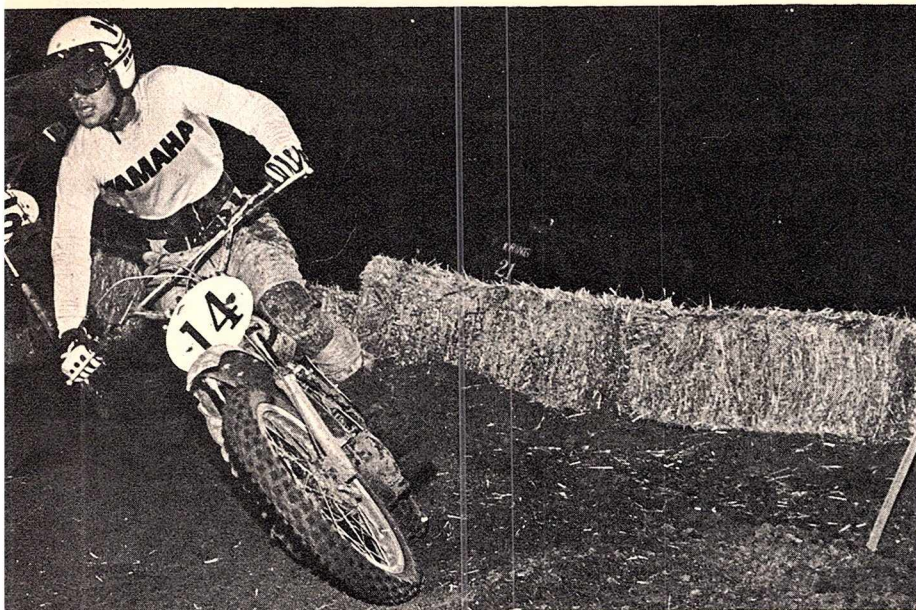
Well, friends, prepare to have your minds boggled and your fantasies realized. Marty Tripes, a good looking young (that's right, folks, that 16-year-old American kid), Southern Californian, whose major worries off the motocross course are probably getting a date for the Junior Prom and fighting the horrors of acne, simply jobbed it to the Europeans in a amazing display of consistency, endurance and graceful riding.

Actually, Tripes' win wasn't the only thing about this particular event that was mind boggling. The event, you see, was held in Los Angeles, California. Nothing really unusual about that, you're probably thinking. But keep in mind that I didn't say *near* Los Angeles, but rather, *in* Los Angeles. In the city itself. In fact, the course was smack-dab in the middle of the Los Angeles Coliseum, a large concrete edifice built for the 1932 Olympics and which now serves primarily as the home gridiron for the Los Angeles Rams football team (as well as an occasional Billy Graham Crusade). Furthermore, the race was held at night, under the lights.

**DeSoto negotiates the jump where he passed Bickers.**







Tripes, displaying his constant on-the-pegs style, leads Gunnar Lindstrom through a turn.

BY BOB SANFORD

PHOTOS BY DENNIS GREENE

# OF MOTOCROSS



brought in some 5,000 cubic yards of dirt at a cost of about \$40,000. Lining the carefully manicured football turf with plywood and polyethylene sheeting, the promoter directed the building of a 5/8-mile, two-foot thick (minimum), meandering series of jumps, bumps, ruts, turns, water, sand and mud. To be sure, the course was small, tight and slow. But this suited just fine the thousands of spectators who hooted and hollered from the concrete grandstands. The whole course was visible from any of the stadium's 100,000 seats, and the multitude of obstacles provided plenty of slam-bang action. (38,000, incidentally, was the "official" attendance figure given. However, many observers feel that figure may have been inflated by as much as 10,000.)

The riders, as could be expected, didn't feel quite so kindly about the course; especially the Europeans, some of whom thought the thing all a bit silly.

"This is no place for a motocross," scorned veteran English rider, Dave Bickers. "In fact, this isn't one. This isn't anything but a scrambles." And as announcer Larry Huffman remarked before the event, "The deck is stacked in favor of the Americans," since the Europeans have virtually no experience under the lights and on a tight, small course. (Riders living in Southern California have at least two opportunities to participate in such events each week.)

Torleif Hansen gets the advantage over the course's highest jump.





Gunnar Lindstrom is introduced during the pre-race ceremony.

Nevertheless, "true motocross" or not, the prevailing rider attitude was probably expressed by American star Gary Jones, who, when questioned about his attitude toward the course, replied, "What difference does it make?"; meaning, he explained, that everyone had to learn the new course and was, therefore, at the same disadvantage. Besides, you could almost hear him thinking, there's \$20,000 resting on this one, and most riders would do wheelies around a Porta Potti for a crack at that kind of money.

And, no matter what you want to call or say about the event that took place at the Los Angeles Coliseum on that muggy July evening, one thing above all is undeniably true: That motorcycle race—that two-wheeled dash and bash on top of that 5,000 cubic feet of translated soil; that frantic \$20,000 showdown between some of Europe's and America's finest motocross talent; that "1972 Yamaha International Cup"; that so-called Superbowl of Motocross—had to be—just *had* to be—one of the most exciting motorcycle events ever staged in this country!!!

The whole thing *really* started with the pre-race television ads, which probably left the feeling that motocross was just one step removed from the patently fake "sport" of Roller Derby.



John DeSoto led more than half of the second moto.

(This, by the way, may be one of the major reasons why the event was sparsely spectated by the hard-core cadre of motocross "purists." By far and away the majority of those hooting, hollering and guzzling beer in the grandstands were—it's even admitted by the promoters—newcomers to the sport.) To get the evening's activities underway, a group called (if memory serves me correctly), The California Cavalry Marching Youth Band did some marching and banding, while announcer Huffman began to whip the crowd up with his speedway-trained voice and constant patter with on-the-field "color" man, John Huetter, editor of *Cycle News*. You knew before the thing even got underway that you were in for a good one!

Finally, just for good measure, a bugler, on loan from nearby Hollywood (horse racing) Park and appropriately garbed in what looked to be a Barnum & Bailey ringmaster outfit, blew the Call To Post. Da-da-da-dadada dadada-da-da-da-da. Da-da-da-dadada dadada-da-da-da-da!!

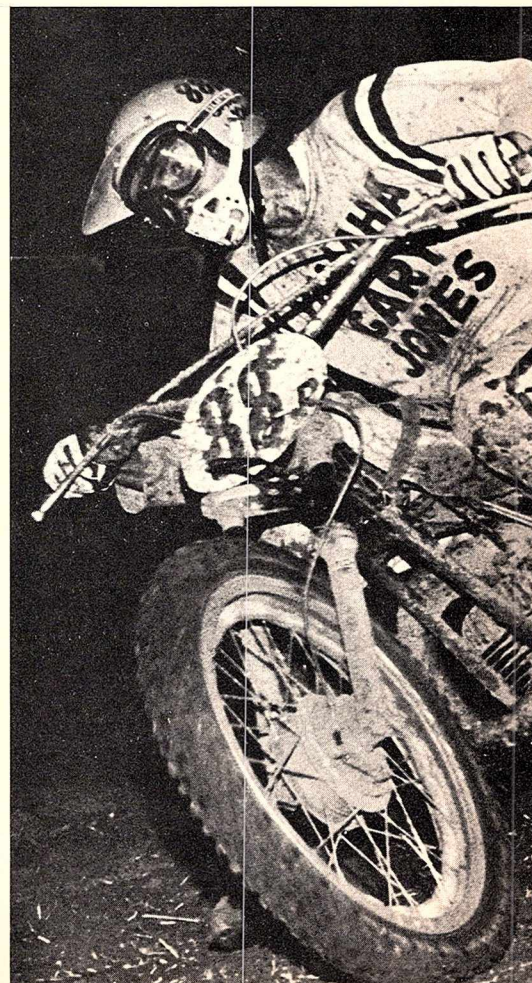
Fans expected a spectacular event. And that's exactly what they got. Including some very fine racing.

There were two classes of competition in the Coliseum that night: The 250cc International (the feature, with all the Europeans, of course); and the 500cc National support class. Forty riders contested each class, with the feature running three 20-minute motos and the support group three 15-minute races. And while there was some excellent racing—as well as some super spectacular spectating—in the first five motos of the evening, it wasn't until the final race that most fans knew—absolutely *knew*—that their \$6 ticket was a rock bottom bargain.

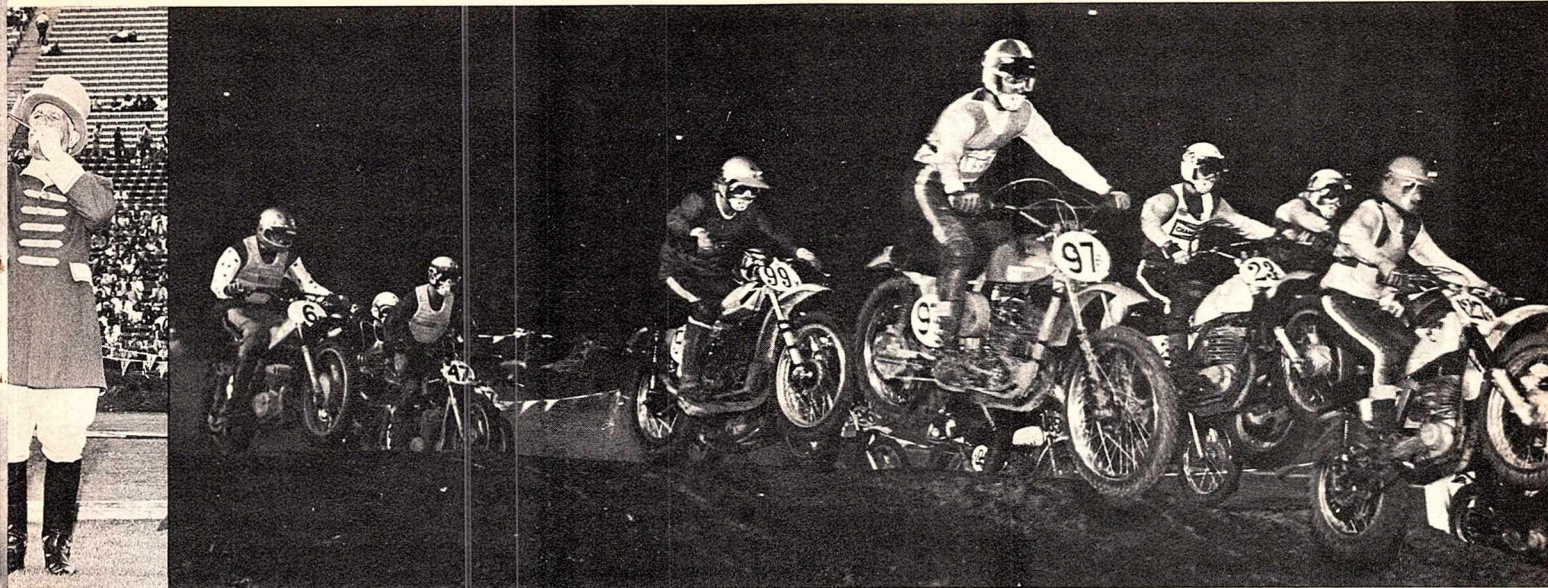
In the first 250cc moto, Swedish Husqvarna rider, Torleif Hansen, jumped out to a lead that he never relinquished. Hansen, the Number One

rider for his factory team, was obviously the odds on favorite to take overall honors, particularly since Sylvain Geboers, the ace Suzuki factory rider and runner-up in last year's 250cc world competition, had failed to make a scheduled appearance, due to contract difficulties with a Belgian racing promoter. However, young Mr. Tripes began to make his presence known, as he finished in second place, a scant 20 to 30 yards behind the lanky, blond Swede. Additionally, Tripes had to

Gary Jones drives his Yamaha into a berm.







maneuver his factory Yamaha around the likes of Arne Kring (Hus), and Hakan Andersson (Yam).

After a hard-fought victory in the 500cc support class by Gary Chaplin, the 250cc machines lined up for their second round. John DeSoto, the bully hell-bent-for-leather Hawaiian, jammed his prototype Kawasaki (reportedly finished only 24 hours before the race) into the first corner and emerged as the initial leader. Two turns and a sweeper later, DeSoto, along with more than a half-dozen other riders, found themselves slipping and sliding, leathers to the ground, through a seem-

ingly level, yet obviously slick, section of the course. Tripes, who had been running about 4th, skirted by the wreckage and into a 200 to 300 yard lead. But AMA officials decided that a re-start was in order because of the number of riders involved in the first lap crash.

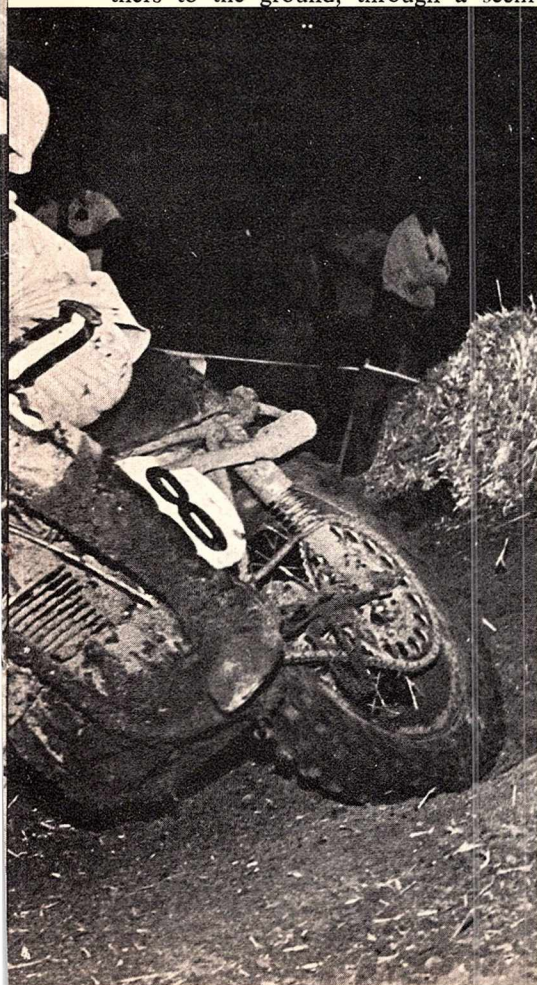
On the re-start, former four-time World Champion, Torsten Hallman put his factory Yamaha into the early lead, followed by CZ mounted Dave Bickers and the old slammer and jammer himself, John DeSoto. Almost immediately, DeSoto got by Bickers on a fantastically brazen leap over one of the course's highest jumps. Oh, did the crowd roar as he took out after Hallman, finally passing him with another fantastically brazen maneuver. Meanwhile, Arne Kring had moved up into 3rd, while Northern California great, Bob Grossi, had placed his Husky in 4th, Hansen held down 5th and, surprise—Marty Tripes had moved up to 6th. DeSoto continued to stretch his lead until Kring passed Hallman and began applying the pressure. But DeSoto wasn't through executing fantastically brazen maneuvers, although the last one didn't turn out all that well. With seven minutes left in the race and with Kring attempting to gobble up his rear wheel, DeSoto attempted a rather unorthodox line over a jump. For whatever reason, the former Hawaiian champ found himself totally out of shape and tumbling over the handlebars. For a seeming eternity, he lay on the ground and officials motioned for an ambulance. Finally, shaken badly but apparently with everything still intact, DeSoto walked back to his pits, where he retired for the night. Kring, of course, had moved into first, and Hansen had taken over 2nd. Tripes? Right behind Hansen, of course. But not for long. With just a few laps to go, Tripes slipped under the Swede and held on for his second 2nd place finish of the evening.

#### Start of the 500cc support event.

So the stage was set for the third moto showdown. Tripes, with two second places and Hansen, with a 1st and a 3rd, were tied for first place overall. The one who did best in the final confrontation would undoubtedly take home overall honors, as well as the lion's share of the purse.

After two wins in the 500cc class by Bryar Holcomb (plus the overall win), and a successful 140-foot leap by "Super Joe" Einhorn, the International class once again came to the line.

Southern California Maico man, Tim Hart, jumped into a lead he doggedly held for several laps, until Hansen, of all people, managed to find an opening. And, alas, the crowd's darling, Marty Tripes, was way back in about 9th place. Nothing but a miracle could salvage an American victory, now. Well, the crowd got their miracle, plus a graceful, determined ride by their young hero. Sometime in the early stages of the race, Torleif Hansen busted one of his rear shocks. It didn't put him out, but it did slow him down. Hakan Andersson took over the lead and Hansen fought to hold on to second. Meanwhile, Tripes, standing on his pegs at least 90% of the time and looking so smooth that you'd swear he should be dead last, began picking off riders. One by one, he'd move up a place, until, with about six laps to



Riders frequently found problems when going through the tight second turn.





go, he was staring at Hansen's broken rear shock. But Hansen, the old pro that he is, wasn't about to let the young upstart by. Not without a fight, anyway. Tripes found a small opening and momentarily slipped past, only to be repossessed at the next corner. But the 16-year-old American kid, who was only contesting the second International race of his life, was more than a bit determined.

"I just waited for him to make a mistake," Tripes said in a post-race interview. And although the mistake wasn't apparent to the tense, standing-in-their-seats crowd, the actual pass certainly was, as absolute mayhem broke out when that 16-year-old American kid permanently stuck his front wheel into second place. People went absolutely crazy, throwing beer, jumping up and down, falling all over each other, shouting, crying, screaming!! And that was about it. Andersson held on for the win and Tripes held onto

**Tripes showed notable advantage coming over jumps.**

**Announcer Larry Huffman interviews the victor, Marty Tripes. Diff-Brake supplied the champagne.**

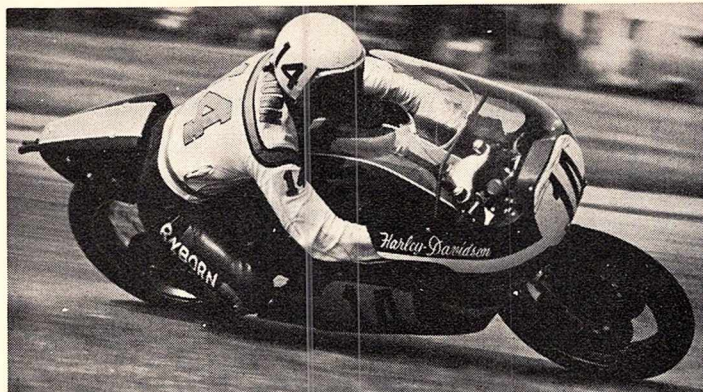


second, as well as the overall victory! The only thing left undone was for Mike Goodwin to get his shovels together and move 5,000 cubic feet of dirt out of the Coliseum. (Something he did, incidentally, in time for a soccer match featuring the famed Pele three days later.)

The Coliseum people were so happy about the success of the venture that they've invited Goodwin and company to do the whole thing over again next year. And Goodwin says he'll take them up on the offer, since he made money and feels motocross at the Coliseum is "good for the sport."

Meantime, people are clamoring that Americans are now of International caliber, and that Marty Tripes is a future World Champion. Maybe. On both counts. But quite a few more races over longer, tougher courses are required before the final results are in. Good luck, Marty!





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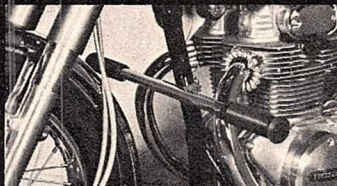
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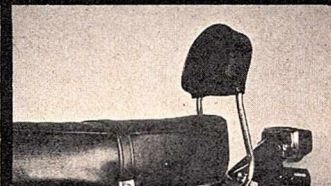
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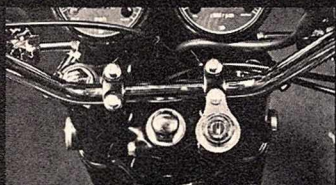
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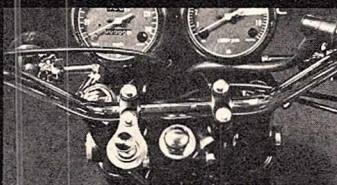
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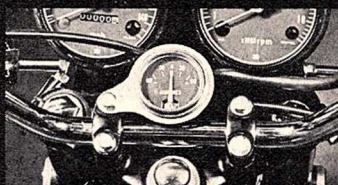
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# POWDER PUFF POWER

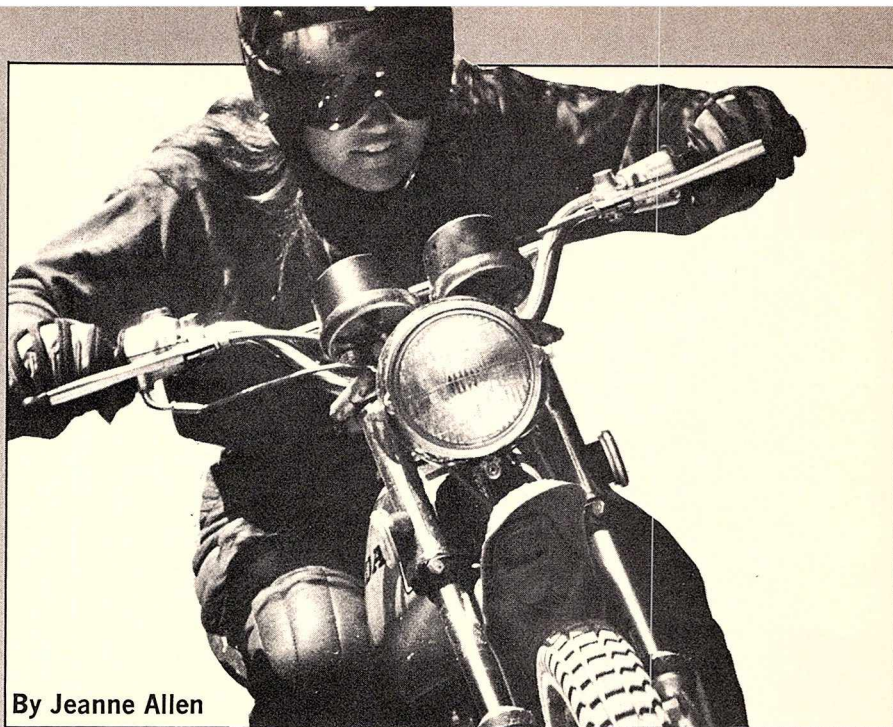
A day at the Champion Spark Plug Western (or Eastern) Technical Service Center can certainly get you "tuned in" on the importance of your spark plugs. Such a day was made available by Chris Kouri, Champion's Territory Manager, for the girls in our area to attend. Unfortunately, a last minute date change made it impossible for many of the girls to participate in this fun, but educational, class.

It all started at 8 a.m. with a drive to the Santa Ana-based school with Chris Kouri. We were greeted at the door by Sonny Weinberg, Senior Regional Engineer, Tom Wagner, our Service School Instructor, and Jac Reynolds, Kawasaki's Audio Visual Specialist. (Kawasaki's Audio Visual Department is just a few doors away from the school.) After signing the guest book, we were seated in the classroom. The classroom will hold up to 19 students at each session.

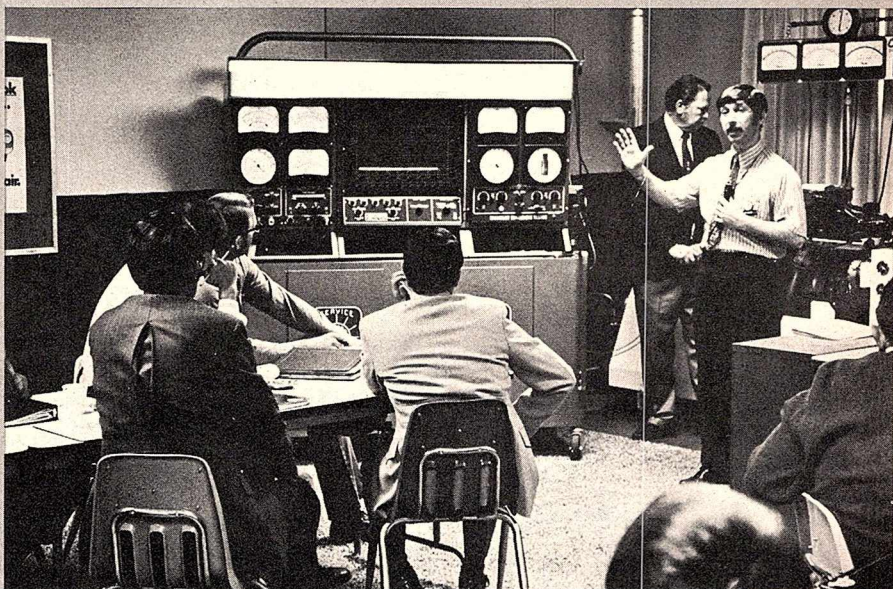
The purpose of the Western Technical Service Center is to provide theoretical and practical training on all phases of tuneup. Students that have, and will, attend classes at the Service Center come from service stations, independent garages, dealerships, and company fleet shops. Naturally, they also have special classes for motorcycle enthusiasts. If you're interested in attending a class such as this, whether at the eastern or western facility, as a club or group function, you can write to the following address for further information on attending the school: Champion Spark Plug Company, Automotive Technical Service Dept., Box 910, Toledo, Ohio 43601. The eastern location is right in Toledo, or if you're a westerner, the western facility is in Santa Ana, California.

Now, on to the technical stuff! Unfortunately, because of the limited space allocated for "Powder Puff Power," I won't be able to elaborate too deeply on the subject of spark plugs. I can give you a few tips on the basics however, and hopefully can be of some help.

First of all, girls, you have to realize that you can't throw just any ol' spark plug into that hole. There's such a thing as "thread sizes" and length of "reach" that gets that spark down where it counts! Thread sizes are measured by the diameter of the spark plug where the threads are located at the base of the plug. Average thread sizes for motorcycles are 18mm, 14mm, 12mm, and 10mm. The reach of the spark plug is determined by measuring the distance from the gasket seat to the base of the shell (Illus. A). Not inclusive of this meas-

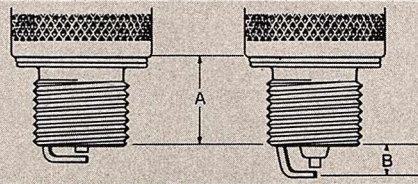


By Jeanne Allen



This is how it looks at the Champion Spark Plug Western Technical Service Center (sorry, girls, I didn't have a picture showing the girls that attended). Shown with the microphone is Tom Wagner, Service School Instructor, and Sonny Weinberg (in background), Champion's Senior Regional Engineer.

urement is the distance the electrodes protrude . . . or the firing nose projects (Illus. B). Also, if the plug comes with a gasket in the package, be sure to use it!



If you use a spark plug that has too long of a reach your plug may interfere with the valves or pistons. In the case where a plug is used with too short of a reach, the exposed threads located inside your cylinder head can cause hot spots and decrease the compression ratio.

Remember, always use the proper thread diameter and reach for your particular motorcycle. Each spark plug manufacturer has a booklet listing "recommended" plugs for your scooter. The listings are by make, model, and engine displacement. Right next to this info you'll find a Greek-looking code, i.e. (in the Champion booklet) N-57, L-81, etc. This is your "recommended" plug. These recommendations are for operating conditions using manufacturer's specified timing and carburetor settings. If you've messed with these settings you might have to vary the "heat range."

The prefix letter to the left of the number signifies the reach and thread diameter, i.e. N =  $\frac{3}{4}$ " reach,

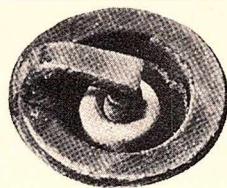




Two great products to use on your spark plug. I use the Ignition Seal also for waterproofing my bike. Just spray it around the plug area along with the ignition and carburetor.

14mm thread, or L=.472" reach, 14mm thread. The number on the right signifies the heat range. The larger the number, the "hotter" the spark plug. The smaller the number, the "cooler" the spark plug. Too hot of a plug can cause pre-ignition or detonation, while on the other hand, too cold of a plug can cause carbon and oil fouling (this is what I've suffered by putting around while running with a "cool" racing plug).

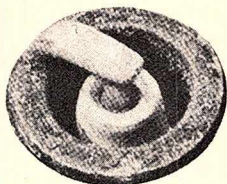
To get a "true reading" on your spark plug, follow these simple steps: (1) Accelerate your motorcycle up through the gears until you have



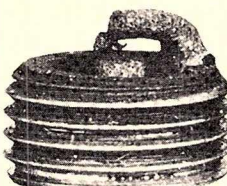
**NORMAL**—Description: The insulator tip may be gray, tan or light brown, shows very few combustion deposits, the electrode is not burned or eroded. This is the proper plug for your engine.



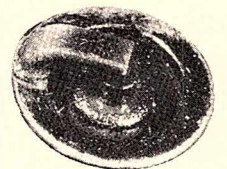
**WORN OUT**—Description: Corrosive gases formed by combustion and the high voltage spark have eroded the electrode. Plugs in this condition require more voltage to fire, often more than the ignition system can produce. Throw it in the ash can.



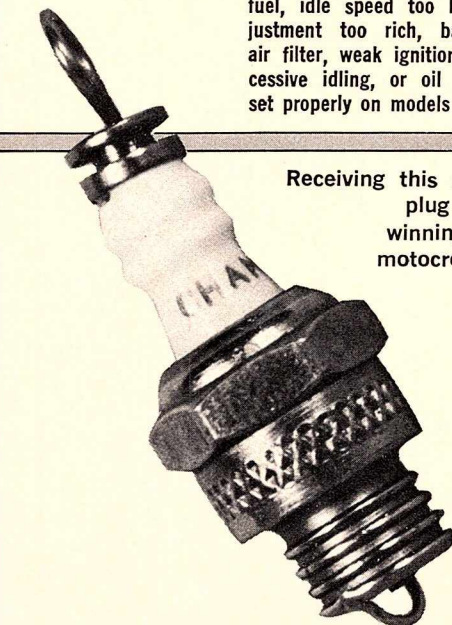
**OVERHEATED** — Description: The electrode is burned, and the insulator tip is light gray or chalk white. Causes: Heat range is too hot, lean carburetor setting, engine overloading, loose carburetor mounting, or over-advanced basic timing.



**GAP BRIDGING** — Description: The spark gap is shorted out by combustion deposits fused between electrode. Causes: Excessive carbon in the cylinder. 4-stroke engines—Poor oil control. 2-stroke engines—Improper fuel/oil mixture, clogged exhaust ports or oil injection pump not set properly on models with oil injection. You can kiss this one good-bye, too.



**WET FOULED** — Description: Black, really black, insulator tip, damp oily film over firing end, carbon layer over entire nose, and the electrode is not worn. Causes: Wrong spark plug heat range (too cold). 4-stroke engines—Worn oil control ring, worn valve guides, or possibly an over-filled crankcase. 2-stroke engines—Excessive oil or use of non-recommended oil in fuel, idle speed too low, idle adjustment too rich, badly clogged air filter, weak ignition output, excessive idling, or oil injection not set properly on models so equipped.



Receiving this rare little plug was like winning a local motocross event.

reached a good "cruising" speed; (2) Pull in the clutch lever; (3) Kill the engine immediately with either the kill button or the ignition key—**DO NOT DOWNSHIFT**—stop the bike by using your brakes only; (4) Pull the plug out and see how she looks. The following photos and explanations should help to determine if you're right-on or you have a problem:

When replacing your spark plug, be sure to clean it thoroughly first. A clean plug is a happy plug. Two of the exceptional spark plug cleaners on the market are made by VHT and Petrochem. Spark plug cleaners are the best thing since peanut butter sandwiches. If your plug is excessively dirty you can brush it lightly with an old tooth brush (a good thing to keep in the ol' tool box). Be sure to check the spark plug gap as well. Champion recommends a .020"-gap on all but a few of their motorcycle plugs. The use of a wire gauge-type gapping tool is the best and it's also very easy to use. Don't forget to rub down those plug threads with some type of anti-seize lubricant to avoid destroying the threads in your aluminum head. Any type of dirt on these threads while you're tightening the plug into the head can result in a big no-no. The anti-seize lubricant will aid the plug into the proper position. When you tighten your plug, tighten it until you feel slight resistance, and then turn the wrench about another eighth of a turn (or until the gasket is crushed).

During our class we were fortunate enough to see two different video tapes from Kawasaki, one of which showed the proper way to pressure test an engine. We also watched three films. One of the films actually illustrated real-live detonation. It looked like an explosion inside the engine! Scary! A dynamometer was fired up in the room with a rip-roarin' Ford Six attached to demonstrate engine temperatures at various miles per hour.

Upon leaving the school, stomachs full from a tremendous lunch, that great bunch of guys gave each girl what appeared to be a spark plug charm. To our amazement, they turned out to be real spark plugs, only on a smaller basis for model airplanes. We all wear them proudly either on necklace chains or earrings. Hats off to you Champion Spark Plug Company for recognizing the Powder Puffs!

Do you have an interesting Powder Puff activity in your area? Let's hear about it! Send your letters, stories, photos, etc. to **Powder Puff Power** c/o **Modern Cycle Magazine**. **KEEP ON PUFFIN'!**



# NOSE -TO-NOSE TEST: THE 125 DKW AND SL-125 HONDA

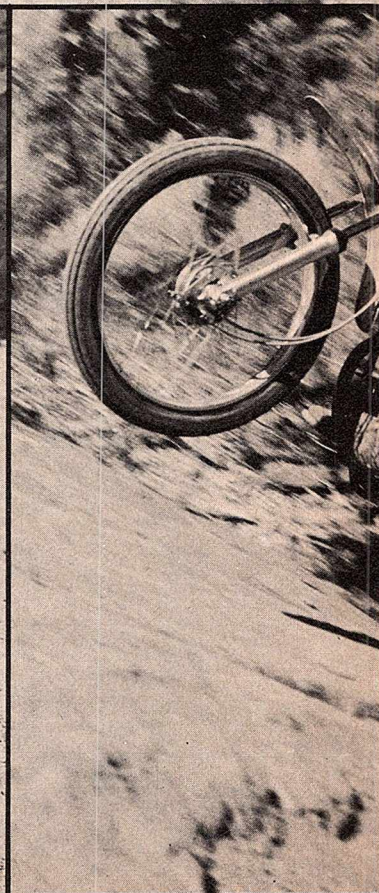


## MODERN CYCLE'S STAFF MATCHES 'EM UP AND TEARS 'EM APART

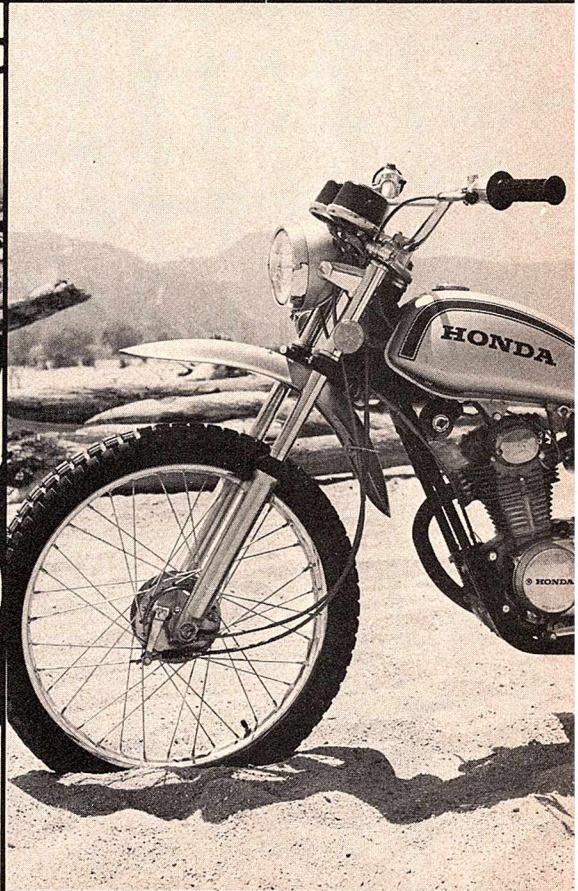
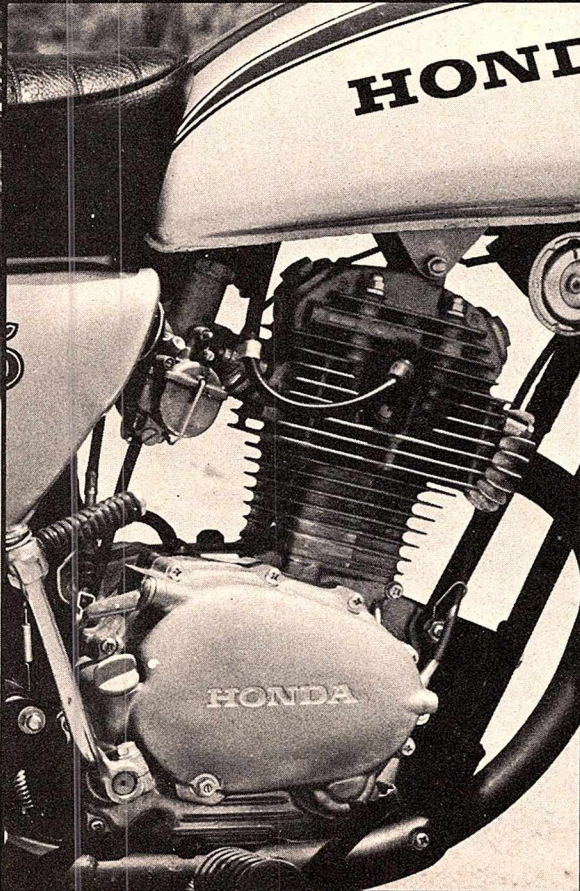
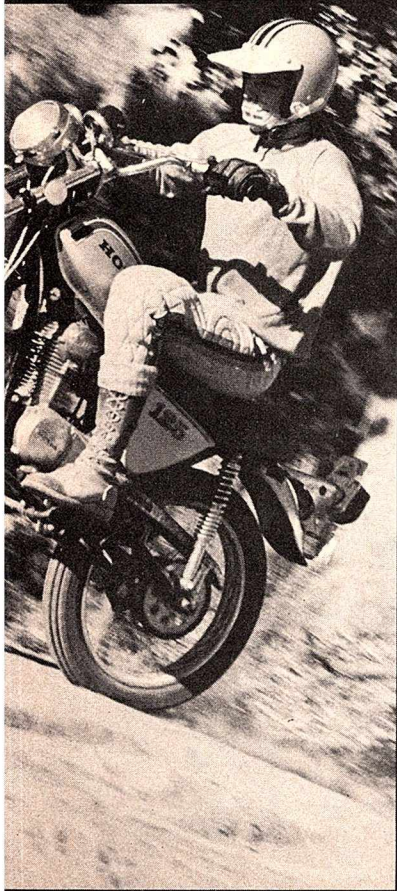
There's a gawdawful abundance of motorcycles to choose from these days. Not only is the spectrum of motorcycling vast, from big bore tourers to mini-bikes, but there's a dozen different makes for each category. Letters sent to us by you, the reader, constantly ask which is best, or what should I buy. Our policy, like so many other magazines, is to supply information about motorcycles and let the reader make up his own mind.

We're trying something a little different this time, and to be objective we chose two machines committed to the same purpose yet of totally different concepts—a Japanese four-stroke and a European two-stroke.

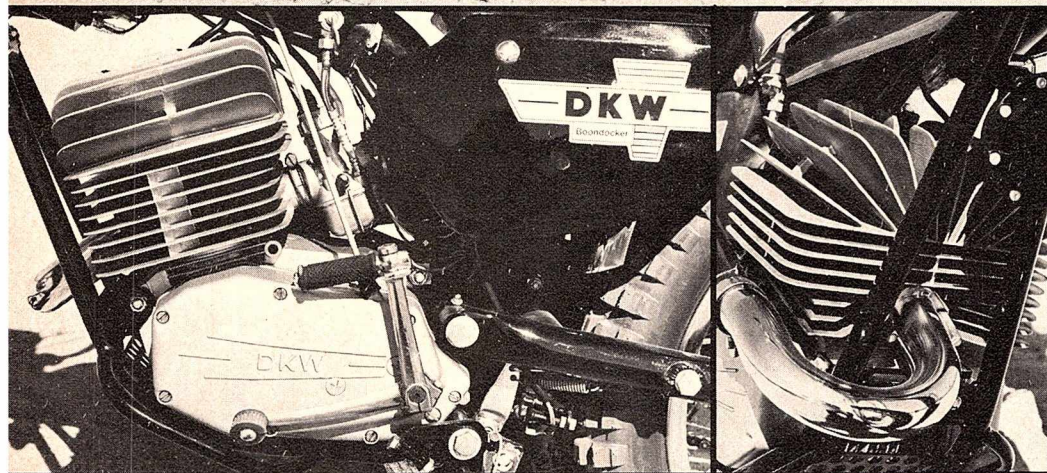
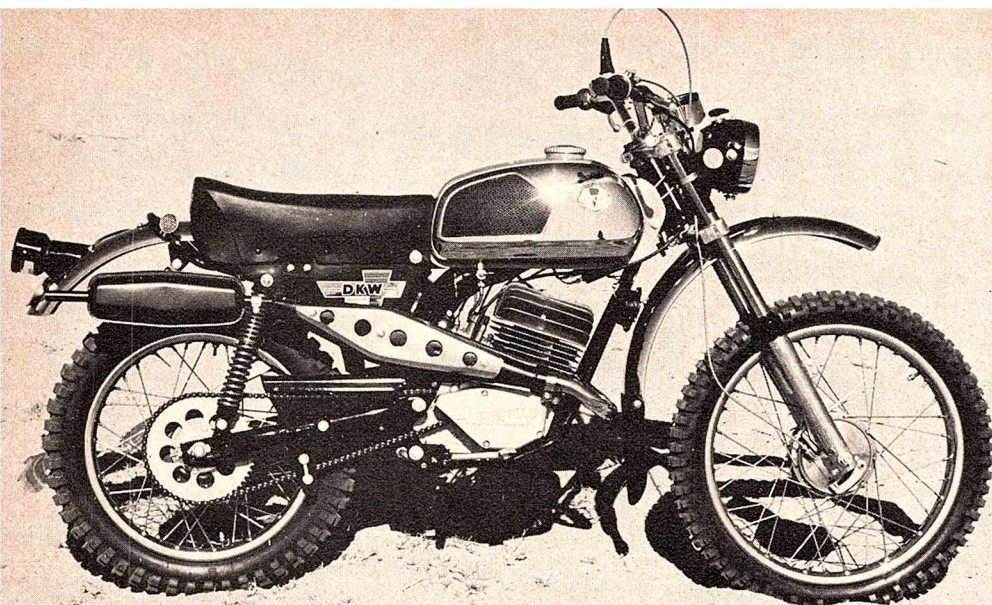
We also took a pair of young men, both 17, who have been riding motorcycles cross country and on trails since they were 9. One is a qualified District 37 desert Amateur and the other was boosted to A status in enduros the first of this year. We use them frequently with the magazine











test bikes so they have had plenty of experience, and no hang-ups.

The DKW and Honda were taken over the same sections at Indian Dunes singularly, together, and with both riders switching machines. The first comment came from Bobby when he said he couldn't get the DKW front end up. Both liked the power of the Deek, and it just blew the wheels right off the Honda when they drag raced them. So, from top to bottom, here's the whole bloody result of our nose-to-nose test.

The brakes on both bikes worked great as long as they were dry. After a session up and down the river at Indian Dunes, the Deek's brakes began to lose their stopping power. The Honda's remained unaffected.

The Honda's front end was super light and they could pull it into the air easily, it steered light, too. The DKW had a much heavier feel to it.

While running in the water they experienced difficulty keeping the DKW running, and it died a couple of times when they rode it out of the water and let it idle. At which time the Deek took several kicks to get it running again. The little Honda just kept ticking away oblivious to the fact that it had just taken a bath.

Although the SL-125's engine is way down on horsepower, it produced enough torque to pull the bike over the same hills the Deek would fly over. In fact, the Honda was easier to ride. "Just turn it all the way on in low, lean way over the handlebars, and point it up the hill," was Greg's comment. "The DKW has too much power and doesn't get enough of it on the ground, if you try and back the throttle off you lose everything," came from Bobby.

We ran both bikes down the whoop-de-doo (that's a worn out section of sand that looks like a giant washboard with the ditches big enough to swallow the wheels). This is a good test for suspension and handling. The Boge shocks on the DKW weren't up to the job and caused the bike to begin swapping ends while the little Honda dolphined right by. (When you ride the whoop-de-doo backwards they become "sood-ed-pooohws," and if things get out of control you fall on your "ssa.")

In the powersliding smooth track match-up, the DKW had it all over the Honda. Both bikes got over all the trails well, but the Honda was easier to muscle around because of its lighter weight and shorter wheelbase.

In passing, the Honda has a forestry approved spark arrestor, the Deek does not. Both of the Honda's hand levers are the break-'em-off first time you fall type, while the DKW's are





those maulable Magura kind. The Deek has its upswept exhaust pipe well shielded while the Honda's goes under the footrest—both are well done. The Honda makes less noise, uses less fuel, and can't dig as big a trench in the turf as the DKW. Both Bobby and Greg agreed that for riding, and not racing, they would prefer the SL-125. If it came to racing, the stronger DKW with a better set of rear shocks would be their unanimous choice.

### **DKW BOONDOCKER-125**

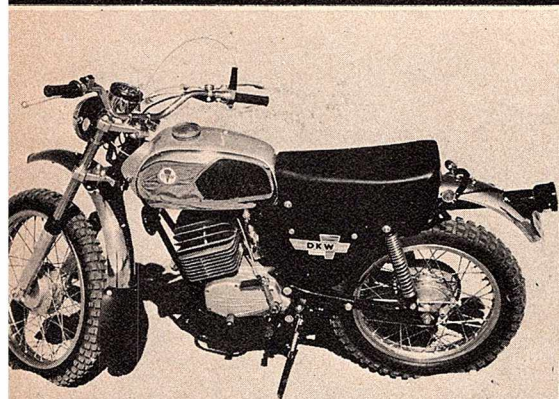
They call it the little bike that wins the big races; the most prestigious of these being a first in class, second motorcycle in the 1971 Baja 500. Another class win in the Mexican 1000 and all kinds of club event victories have built quite a reputation for the DKW, alias Sachs, alias Hercules motorcycles.

Always identified as the motorcycle with unconventional forks, they remained in a class of their own. If you asked an owner how he likes his DKW he would immediately expound upon the qualities of the Earles-type fork. It's rare to see a machine with other than telescopic up front, and this one difference has set the DKW aside from its contemporaries. The Earles units have less unsprung weight, therefore, they should follow a rough surface better. Wheel movement is about the same as a telescopic, and the whole assembly is a tad heavier. A single complaint is that the Earles-type is not as rigid to side loading as the telescopic, nor is it as strong. So DKW made a change, and we had the opportunity to test another kind of DKW motorcycle, one with telescopic forks.

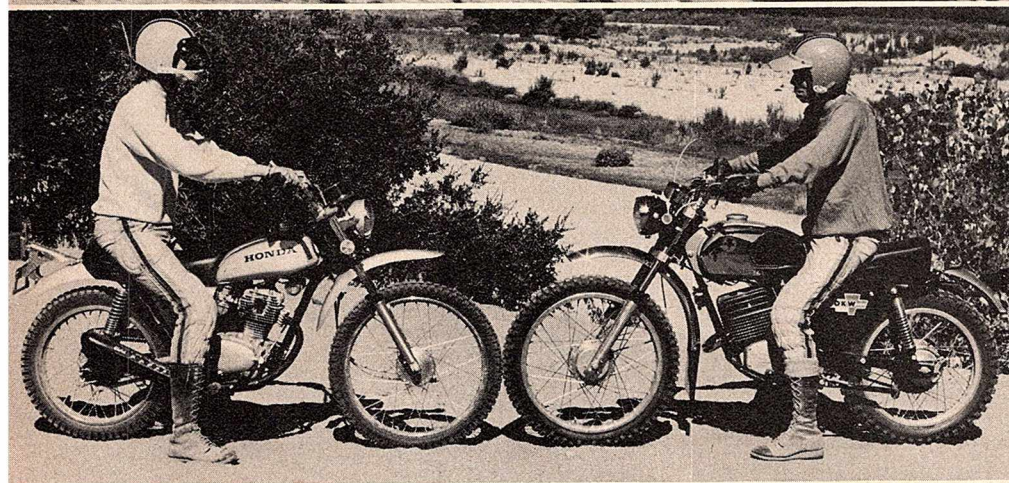
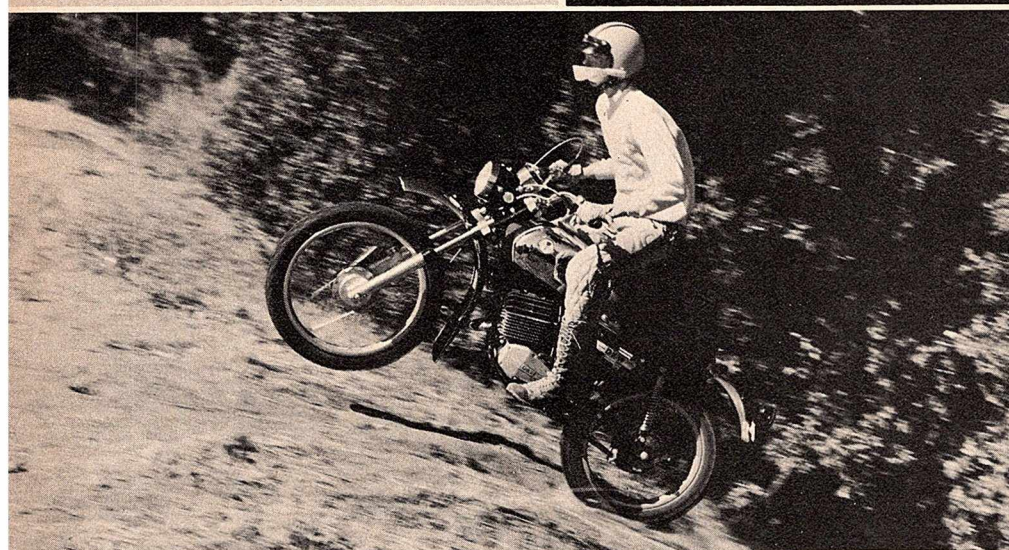
The new "Boondocker" has been fitted with Betor forks which happen to be made in Spain. They have six and three-quarters inches of two way dampened travel and mount into alloy forged triple clamps (also by Betor). The forks have large 36mm diameter stanchions usually found on machines of greater displacements. With a high mounted fender they have succeeded in making their DKW look just like all the other European enduro bikes.

The 1973 Boondocker is part of the new generation, street legal, off-road bikes that we're going to be seeing more and more of. It has the California approved lights, reflectors, and even a battery to keep things glowing if the engine expires for whatever reason. A performance producing expansion chamber is capped off with a very efficient, yet unconventional looking, muffler that holds the decibel meter in the high 80s.





For the serious enduro enthusiast it has all the proper credentials: Front wheel driven VDO speedo complete with resetting to the tenth of a mile in either direction; knobby tires for clawing your way over natural terrain; eleven inches of ground clearance to navigate fallen timbers and giant stones; a 2.9-gallon fuel tank assures one of nearly 100 miles of boondocking; and the 6-speed power plant is one that has proven itself over years of constant use in many types of motorcycles.



Compared to the old Sachs or DKW chassis there have been several obvious and needed improvements. A full loop now goes up over the rear fender establishing a more rigid section under the seat. Shocks are now mounted with plates at both sides of the upper eye, and the swing arm has a stiffener to resist a bending movement between the rear axle and lower shock mount. Footrests are a little stouter, and a large dish has been welded to the bottom of the side stand (neat for parking in soft stuff).

This machine is not an exercise in dieting; indeed, a 250-pound 125 is far from it. Polished steel fenders

and heavy-duty steel rims don't lessen the problem either. These rims are reminiscent of those found on the old CL-72 Hondas. The frame is still a basic backbone strut with a cradle bolted under the engine for protection. A couple of steel tubes have been added to the cradle to protect the outer cases from rocks and such, a carry over from their Six Days bikes. Needle bearings are used in the swing arm fulcrum and they defy wear.

The engine is a 54mm by 54mm square equalling 122cc's. Its 15 horsepower DIN rating is equal to the 20-plus horsepower ratings you hear about. It's all very sophisticated with balls, rollers and needle bearings doing their chore of keeping friction to a minimum. The DKW uses a two ring forged piston, the upper one is a pressure sensitive dyke-type and the other a conventional rail ring. This system works very well with the rail ring taking much of the load from the dyke resulting in greater reliability.

DKW's gearbox is a constant mesh 6-speed that uses a draw key method to engage a given set. This manner of selecting gear sets is used by several manufacturers as it does away with shifting forks and shifter cams. It simply draws an engagement mechanism through the center of one of the transmission shafts locking free-floating gears to the shaft one at a time. It's simple and effective.

Shocks on the rear are provided by Boge, the same people who sprung the front on the Earles-type fork. The progressive spring is what you might call mounted upside down, but it's not. You see, the closer coils compress first and with them mounted at the top, they do not become unsprung weight once their coils are bound. Mounted the other way the coils would be part of the moving portion of the shock and, therefore, would have to be considered unsprung weight. Very tricky, but not very noticeable by the seat of your pants. We did feel that the rear units are lacking in both spring rates and dampening effect.

The Deek has a good seat and sits quite comfortable, standing is also an easy chore while riding this bike. An ultra-short kickstarter in conjunction with an unfavorable cranking ratio makes the job of starting this machine a rigorous one. It takes a lot of thrust on the kick-start lever to get the piston in motion, but once moving the bike fires up readily. A smooth working clutch and a nice set of close ratio gears propels the



DKW in a very rapid manner—it's fast for a 125!

## HONDA SL-125

Hondas always make news, even those that have been around for a while. The little SL-125 got a face lifting for 1972, a color scheme that bore a fair resemblance to its newer big brother, the XL-250.

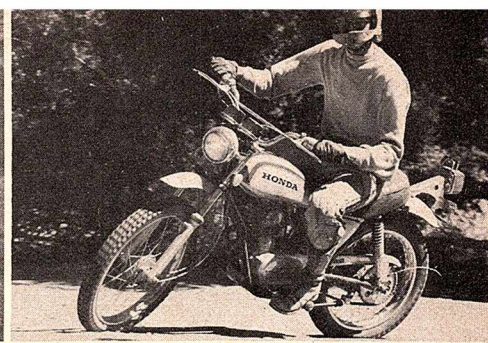
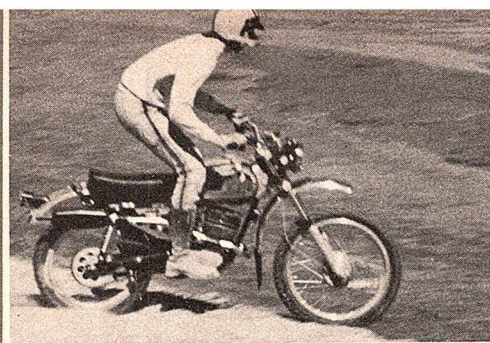
But don't let colors fool you, it's still the same softly tuned, four-stroke single that annoys no one and gets along in its own gentle fashion. A flat black painted spark arrestor/muffler doesn't even give a glint of bouncing sunlight and keeps the engine at a very quiet 76 on our decibel meter. It's an unobtrusive little machine that goes about its job extremely well.

It's difficult to understand what's behind Honda's policies. An early Honda, the '60 CB-92 125cc production sport bike, out performed every other 125 on the market. This little overhead cam twin was a screamer that pumped out 15 horsepower while turning better than 10,000 rpm. Its been replaced by a single that gets about 9 horsepower and is not at all exciting in the stoplight Grand Prix. They simply didn't make the new one for that purpose.

Street legal and designed to be ridden off the road on trails and such, the SL-125 does this very well. It's powered by a reliable four-stroke, single cylinder engine whose oil is carried in the crankcase and circulates through the primary, clutch, and transmission besides doing its job in the engine parts. An exercise in simplicity. A single camshaft is mounted in plain bearings and sits in a casting well above the combustion chamber. A pair of rocker arms open the valves which in turn are closed by a set of progressively wound dual coil springs. The camshaft is driven by a single row chain from a sprocket on the crankshaft. The long chain in turn carries a tension device to compensate for stretch and wear.

Power from the engine to the clutch is transmitted through gears. The multi-plate clutch is heavy-duty enough to take all the abuse a Novice rider is going to give it. A 5-speed gearbox is coupled to this unit, a type we call a sliding gear dog engagement. Three shifting forks and a drum-type cam do the work of selecting the gears. The transmission shifts with little movement of the foot-operated shift lever and readily goes into gear with or without using the clutch. A drive cushion dampens shock loads to the rear hub by mounting the sprocket in rubber cushions. All this is proven Honda

Text continued on page 80



DKW BOONDOCKER..... Make/Model .....HONDA SL-125

\$895.00..... Price .....\$575.00

68 mph..... Top Speed .....58 mph

253 LBS. WITH FUEL..... Weight .....244 LBS. WITH FUEL

2-STROKE, SINGLE..... Engine Type .....OHC 4-STROKE, SINGLE

54mm x 54mm... Bore and Stroke ..56mm x 49.5mm

122cc..... Displacement .....122cc

20 AT 7,400..... B.H.P. at R.P.M. ....N.A.

OIL MIST... Lubrication System ..FORCED, WET SUMP

2.9 GALLONS..... Fuel Capacity .....1.8 GALLONS

BACKBONE/CRADLE..... Frame Type .....PRESSED BACKBONE/CRADLE

51 TO 52 INCHES..... Wheelbase .....49.5 TO 51.5 INCHES

TELESCOPIC, 6.75 INCHES... Front Suspension ..TELESCOPIC, 5.7 INCHES

SWING ARM, 4.6 INCHES..... Rear Suspension .....SWING ARM, 3.3 INCHES

6-SPEED, CLOSE RATIO..... Gearbox Type .....5-SPEED, WIDE RATIO

Excellent	Good	Poor	IMPRESSIONS	Poor	Good	Excellent
	●		Throttle Response		●	
●			Acceleration		●	
●			Power Band		●	
	●		Starting			●
	●		Engine Noise			●
	87Db(A)		Muffling			76Db(A)
	●		Vibration		●	
	●		Handling		●	
●			Choice of Tires	●		
	●		Suspension		●	
	●		Rider Comfort		●	
	●		Transmission		●	
●			Instrumentation		●	
	●		Lighting			●
	●		Toolkit		●	
	●		Paint and Chrome		●	
	●		Styling			●
	●		Mileage			●
	●		Braking			●

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# EUROPE

Text continued from page 6

ton Commandos (Combat engine), BSA Rocket 3, and Triumph Bonneville. These, as sold, require top grade, and if the rider does not want burnt out valves or holed pistons if forced to use the 2nd grade "juice," then a lower compression must be employed by fitting a thicker cylinder head gasket. The high performance two-strokes such as the Kawasaki three do not suffer from the lower octane gas due to the lower cylinder pressure. In fact, the use of heavy leaded fuel was often the cause of spark plug "whiskering" or gap bridging.

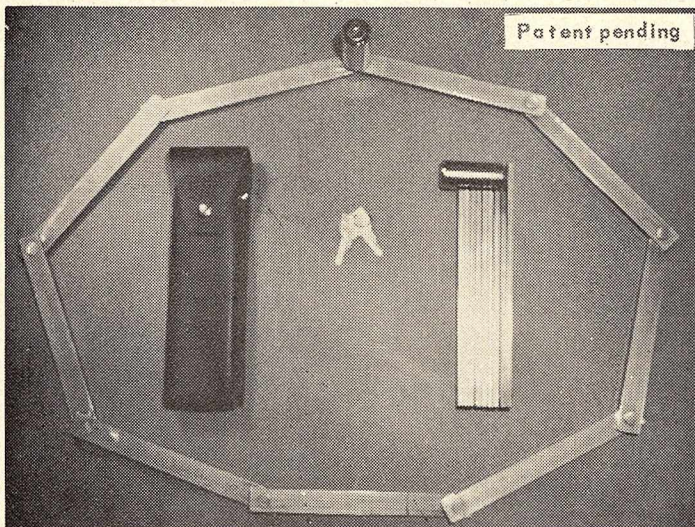
After the bout of fisticuffs between motocross Experts Arthur Browning and John Banks, the governing body of British riders (the Auto-Cycle Union) pronounced judgment to the effect that Browning received a three months (suspended for 12 months) sentence and a nominal fine of 25 dollars. This decision was a great relief to Browning who is making a big name in short track speedway being top points scorer for his Birmingham team.

Following Joel Roberts winning for the second year running of the 250cc Motocross Championship, his fellow Suzuki factory teammate Roger DeCoster has again won the 500cc title; with two rounds still to go he cannot be overtaken. The Championship records since 1952 show Swedish riders with 13 wins, Belgium 12, Britain 6, East Germany 3, and West Germany and Czechoslovakia 1 each.

American Mark Blackwell, over in Europe to increase his motocross experience, is proving to be a dedicated and likeable ambassador for his country. He modestly sets a target of three years hard graft before he hopes to be in the top flight of riders. Blackwell is one of several riders being coached by former World Champion Rolf Tibblin who came over with three riders who opened their program in company with the top European factory boys in Austria (the terrible muddy conditions here were disastrous for the American boys). Then followed Switzerland sprained wrist, Sweden 16th, France big end seizure, Czechoslovakia a broken frame. But Blackwell still soldiers on, gaining more experience and rider respect all the time. Long since has Bob Grossi returned to the more lucrative and easy pastures of the U.S. home motocross scene. If Blackwell sticks it out he will gain a lot of respect and with it help when accepted into the hard school of World Championship Motocross. The other U.S. rider, Doug Grant, crashed a

Text continued on page 77

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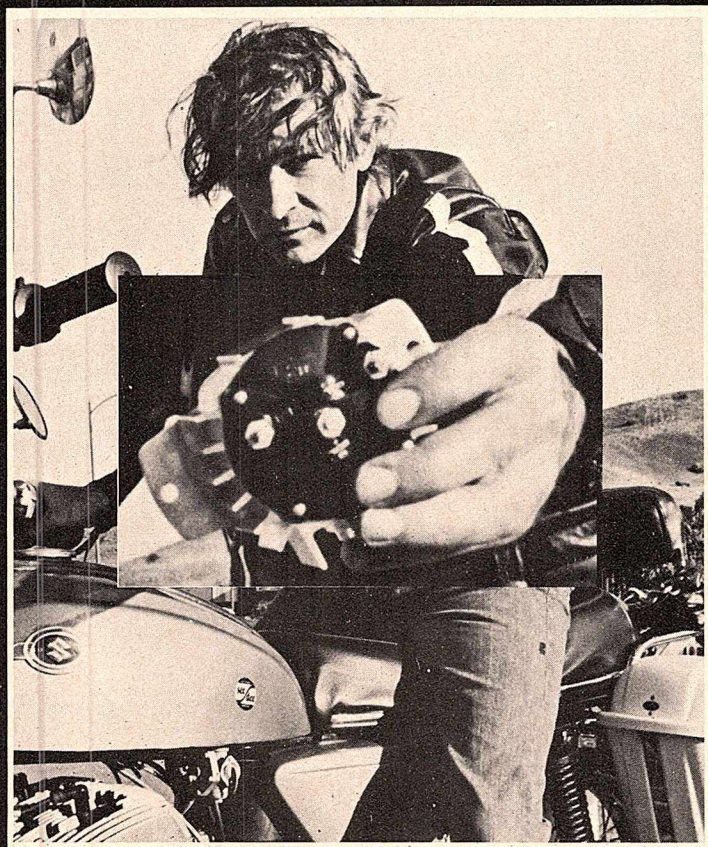
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# putting more zap to your spark



## **SOMEONE ELSE INSTALLS A C.D.I. UNIT.**

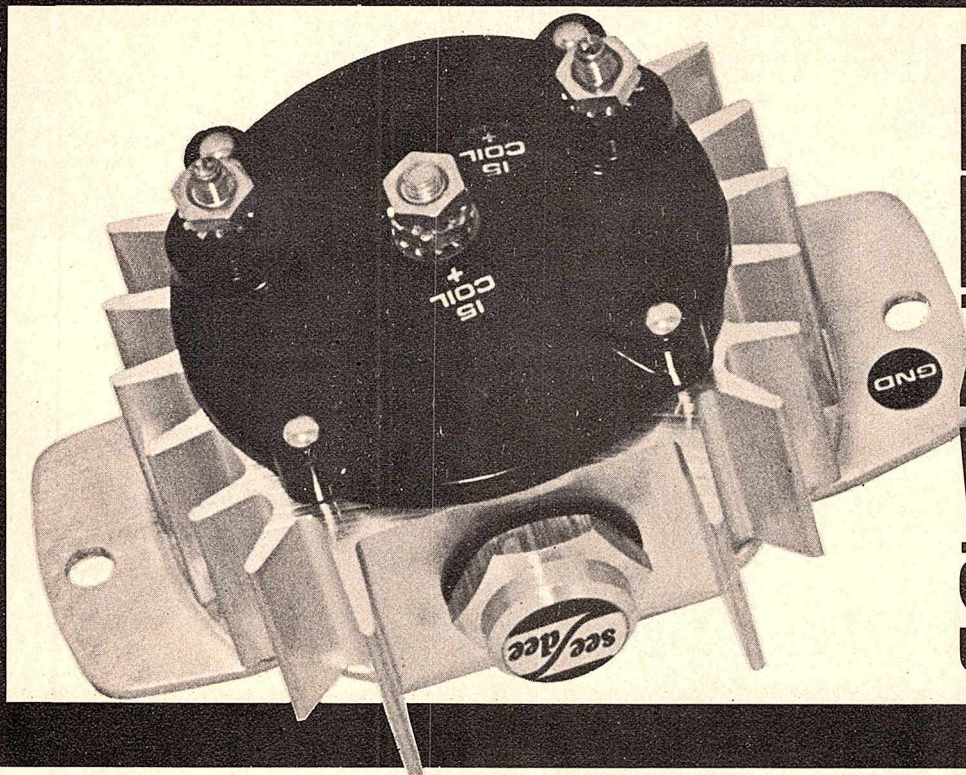
TEXT AND PHOTOS BY E. L. ARMSTRONG

My 500cc 2-stroke motorcycle was purchased with 5,000 miles on the speedo. I soon discovered why the seller was anxious to sell. By 10,000 miles I had just replaced the points for the third time and had gone through some 10 or 11 sets of plugs. The points pitted on one side and built up deposits on the other. Repeated filing and polishing got to be a weekend chore. The plugs had to be removed for cleaning every 400 to 500 miles. I couldn't be sure of even getting to work without stopping on the roadside to hack away at the points and/or plugs. This case is probably more severe than many other riders have experienced, but

from a number of reports I have read (for example letters to the editors of cycle magazines) and heard, 2-stroke bikes in particular are especially hard on plugs. To a lesser extent, 4-stroke bikes offer problems in ignition, but without a doubt in my mind all bikes aren't operating as efficiently as they should. The culprit is the standard point-coil ignition system.

What's the matter with the standard system? First consider that most manufacturers cut the specs on the ignition components for economic reasons to the point where, with a few minus tolerances, the system will barely operate with even slightly fouled plugs. I have checked for





# putting more zap to your spark

example, 4 capacitors distributed by the manufacturer of my bike. All measured about 35% under the lowest recommended uf rating. You can readily see that given a system that at best has not kept up with modern technology, and add a few minus tolerances, the system becomes a real bottleneck. Even if the system is in spec, the point-coil idea simply cannot keep up with the requirements of modern high-rpm, high efficiency, high horsepower per cc, machines.

The problem inside the ignition system is simply that there isn't enough voltage of the right wave form to zap through even a small amount of buildup on the plug. Worse yet, the voltage and current fall off at higher rpm, precisely where you need it most. The voltage rise time across the plug is slow, resulting in even poorer firing ability, which in turn allows more buildup on the plugs (and on the cylinder walls and pistons), and so the circle goes. And while this is going on, the points are switching a relatively high number of amps, tending to cause pitting and buildup on the points resulting in difficult starts and poor running especially at high rpm. To keep going requires more or less frequent filing and polishing depending on many factors such as condition of wiring, wiring connections, adequacy of capacitors, and cleanliness of the point area. Thus, the problems inside the standard ignition translate into the

practical problem of having to spend time at the roadside or your garage if you are lucky.

Judson, a major producer of electronic ignition systems for automobiles, trucks, and boats, now produces an electronic ignition for motorcycles. Judson claims this single unit, only 3½ inches in diameter by 2 inches high, produces voltage and current to your plugs that starts out high and RISES with rpm! The claim is also made that the voltage rise time is a fraction of the normal point-coil system.

Now I am a normal suspicious consumer, having been taken by exaggerated advertising more than once. It's easy to make advertising claims, all you need is a clever advertising agency. The real question to me was, will this one small unit really do what Judson says, and will it therefore keep me from spending my hard earned bread and/or time, keeping the motorcycle running at reasonable efficiency? Will it keep me from having to park at the roadside and clean plugs and points in order to get to the next town or home? I sent the check to Judson, and received the shiny "black" box. If it worked, it was well worth the \$24.95, since I had spent more than that in the past months on points and plugs, not counting my time.

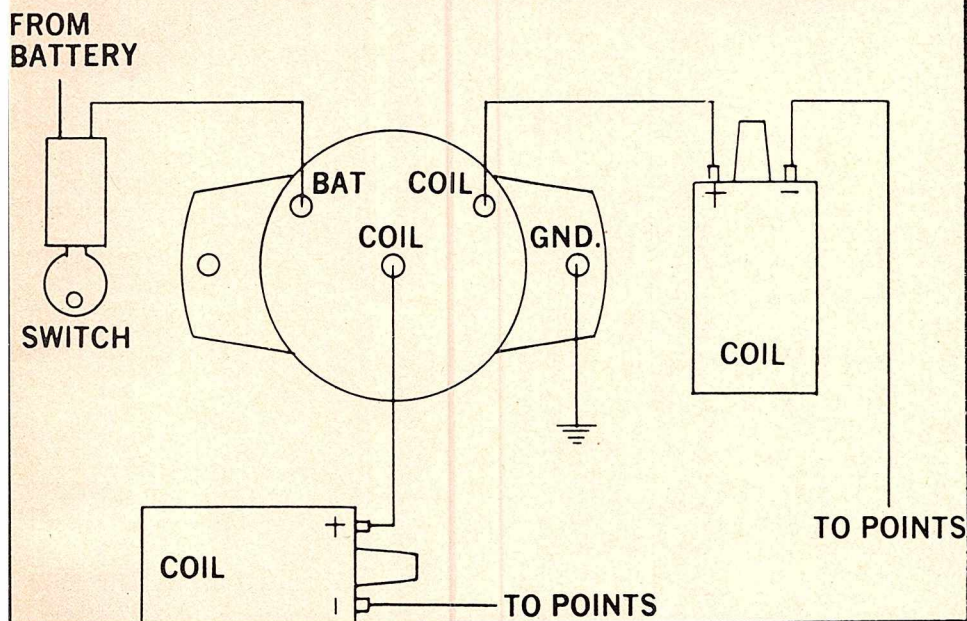
A word of warning at this point. Judson doesn't claim this unit will make a system work that has faulty components. If the capacitors are

shorted, the coil defective, or wiring is poor, the Judson system can't force the ignition system to work. Make sure all your components in the ignition are good, that is, not defective. It is cheap to put on new capacitors, and any shop can check your coils for basic performance. You can check your wiring and change any that looks bad.

Installation of the unit is easy, but not as easy as Judson claims. At least for the first time you do it. You can do it yourself if you only know what a coil is when you see it, and can use a wrench and soldering iron. The thing that takes up time far in excess of Judson's claim of a 30-minute installation time, is finding a location for it, out of the way, but where air can circulate at least a little bit. You'll have to remove or lift the seat, probably take off the tank and the side plates covering the battery or whatever. Then you can look for a good place to bolt the box to. On my Suzuki 500, I finally settled on the backside of the battery box, under the seat, among a maze of wires and electric components. You'll just have to look, and make sure the Cycle/See/Dee unit (Judson's name for it), isn't touching other electrical components that might short. Judson says to install it near the coils. I really don't think on a motorcycle you can get very far away from the coils, so any place you can find convenient should be okay.



## Two Coil Installation



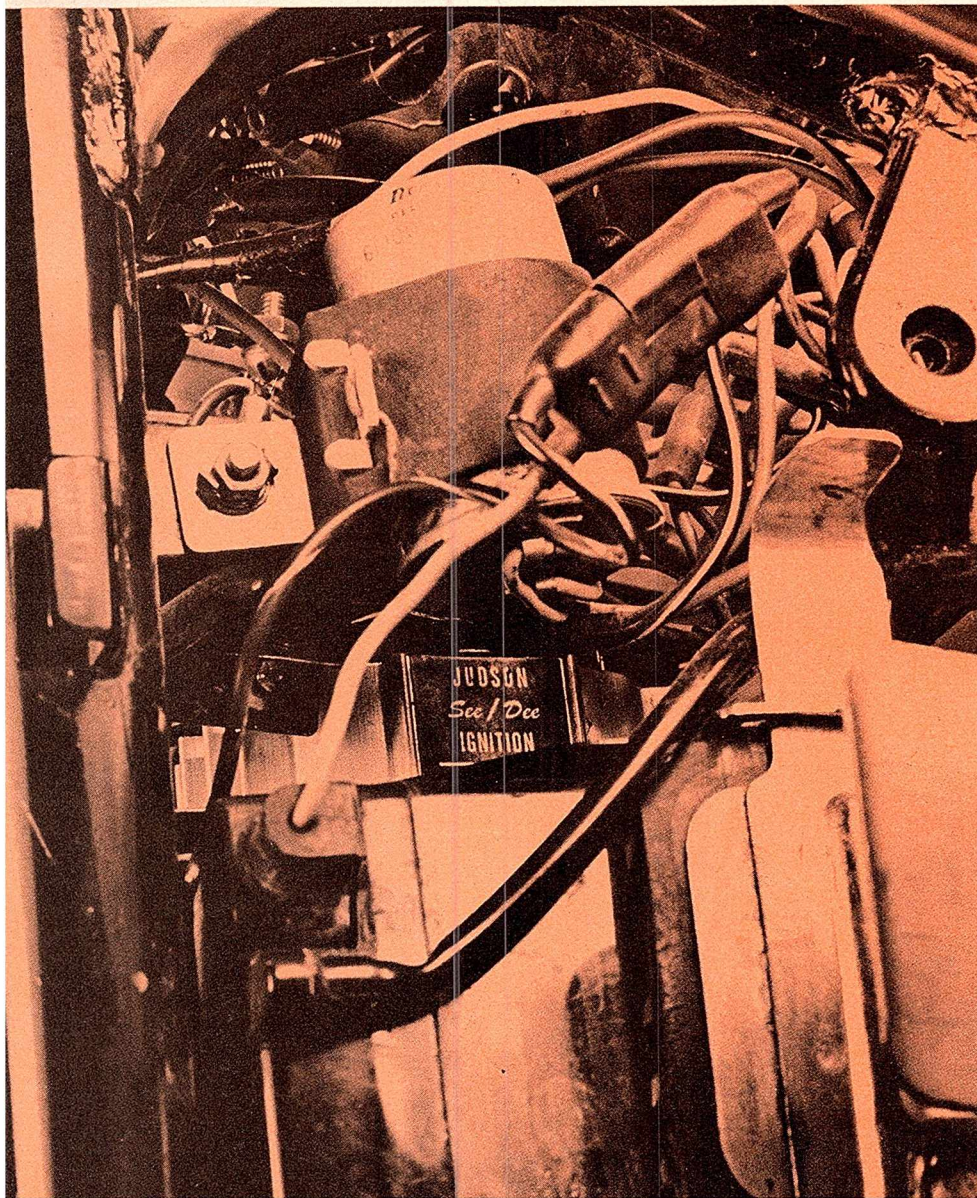
With the one Judson Cycle/See/Dee unit, and a place for it, the wiring changes are so simple you won't believe it. The unit is good for a one or two coil system, my Suzuki 500 has two coils. Judson's instructions are as follows:

### Instructions

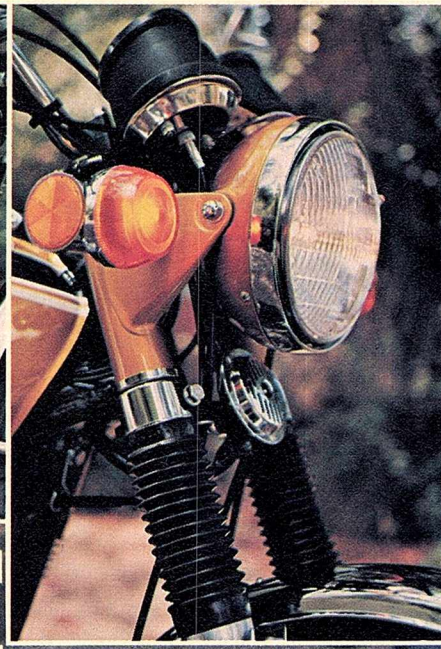
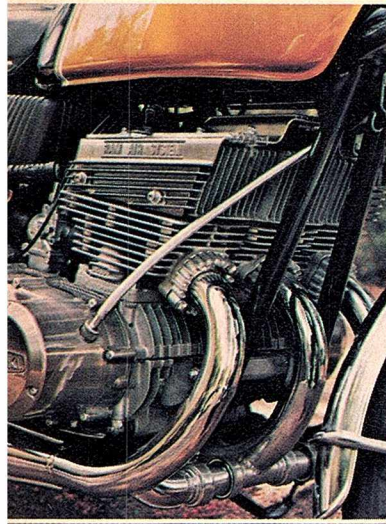
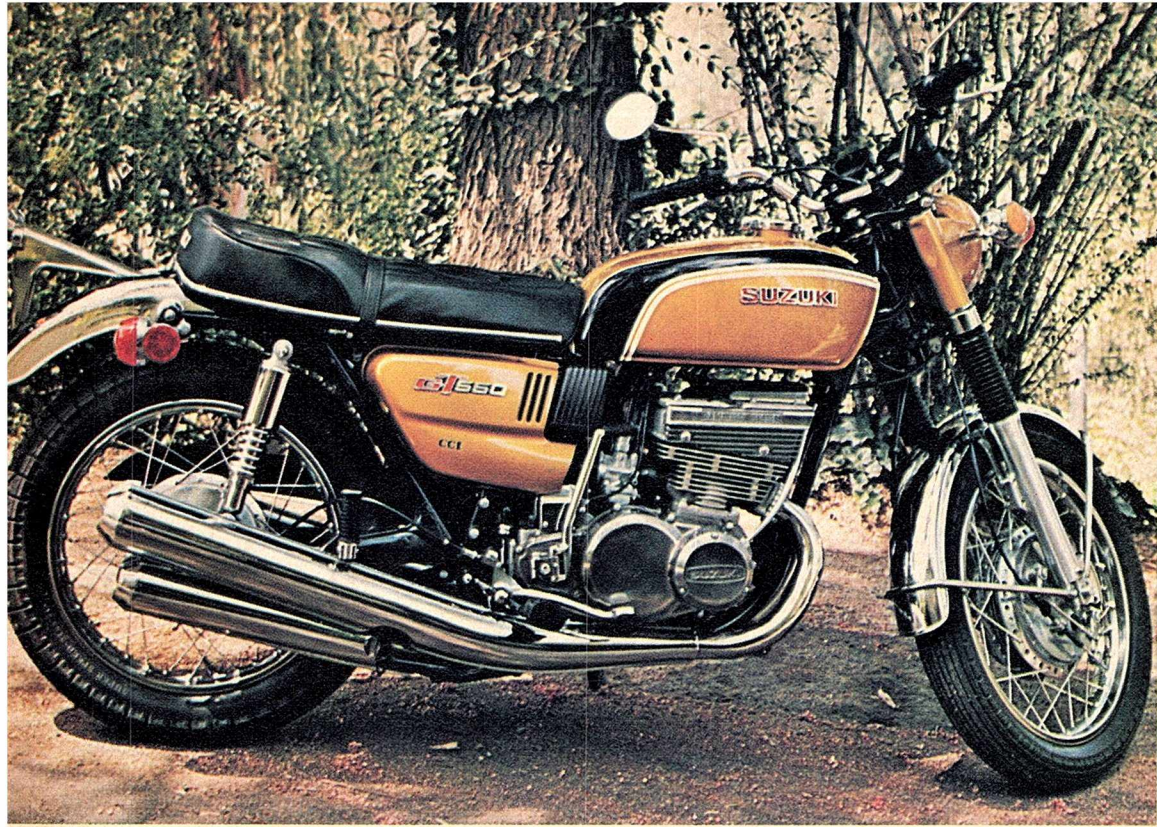
1. Remove wire from positive terminal on the coil and connect to Cycle/See/Dee terminal marked "BAT."
2. Connect positive terminal on coil to either terminal on Cycle/See/Dee marked "COIL."
3. If installation is being made on a two-cylinder cycle with two coils, connect wire from positive terminal on other coil to other Cycle/See/Dee terminal marked "COIL."
4. Make a ground connection from the mounting bracket to ground (on the engine or the frame) Ground connection must be tight.

I started out with an ignition problem. I had checked out all the individual components and none were defective. The points were almost new, the plugs were cleaned, but wouldn't run with the standard system. Despite the curves and advertising claims, the proof comes in performance of the motorcycle. I kicked the machine over. It ran. And ran and ran and ran and still runs. In fact today, nearly 3500 miles since the installation, I've only polished off the points once when it seemed a little rough running. I took the plugs out at that time and they were light coffee tan like they are supposed to be and clean enough to put back in. I can putter around town for hours, hit the freeway, rev it up, there'll be a few coughs, then never, never miss a beat.

It seems to me, the way this See/Dee system performs on my bike, it couldn't help but improve the performance on any bike with a standard point-coil ignition system. Even if you think you're getting pretty good performance, you'll get better performance with the better fire power in the Judson system. You can't really notice high speed misses until it gets pretty bad. It shows up in increased gas consumption and increased carbon buildup in your pistons and exhaust ports (if you have a 2-stroke). So whether you're fighting a real plug-point problem, or getting what you believe to be satisfactory performance, the Judson See/Dee unit installed on your bike will make it run better, and the further in the hole you are to start with, the more dramatic will be the results.







ALMOST ISN'T  
QUITE GOOD  
ENOUGH



# TEST: SUZUKI'S 500 TRIPLE

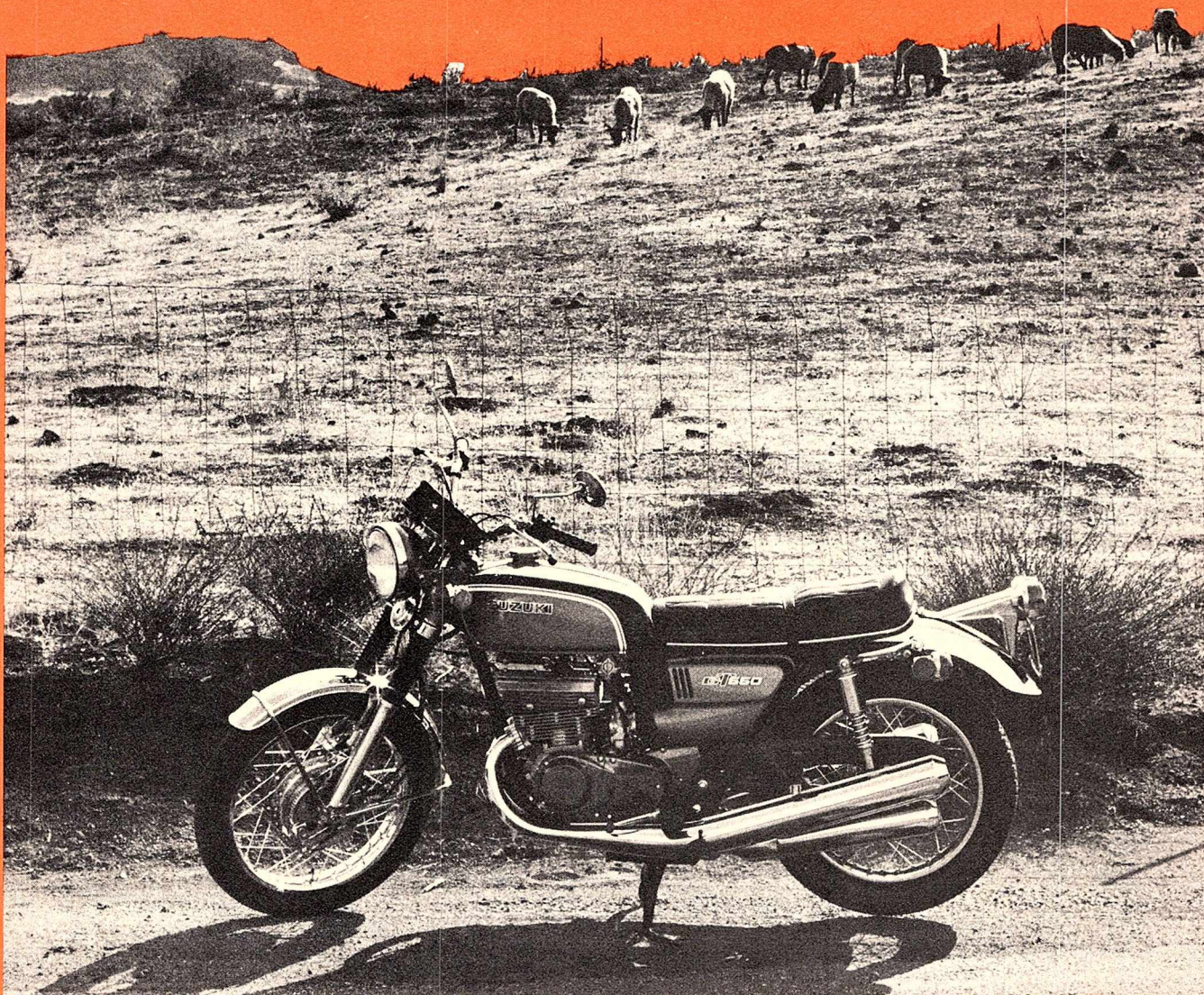
There are perhaps a great number of axioms applicable to road testing motorcycles. One which we particularly favor is: Beware of first impressions. Reason: If we based our evaluation of the Suzuki 550 on our first impressions of it we could have been expected to foresake all other motor-

cycles. It is a comfortable, spirited, beautifully detailed road burner that is about as free from engine vibration as is possible for a motorcycle to be. And these characteristics held up throughout the time the Suzuki was in our possession. However, some not so obvious faults were to make themselves known as the test miles were accumulated. Where the 550 is good it really shines. There are indications, or at least rumors, that Suzuki's triples are interim engines—something to fill







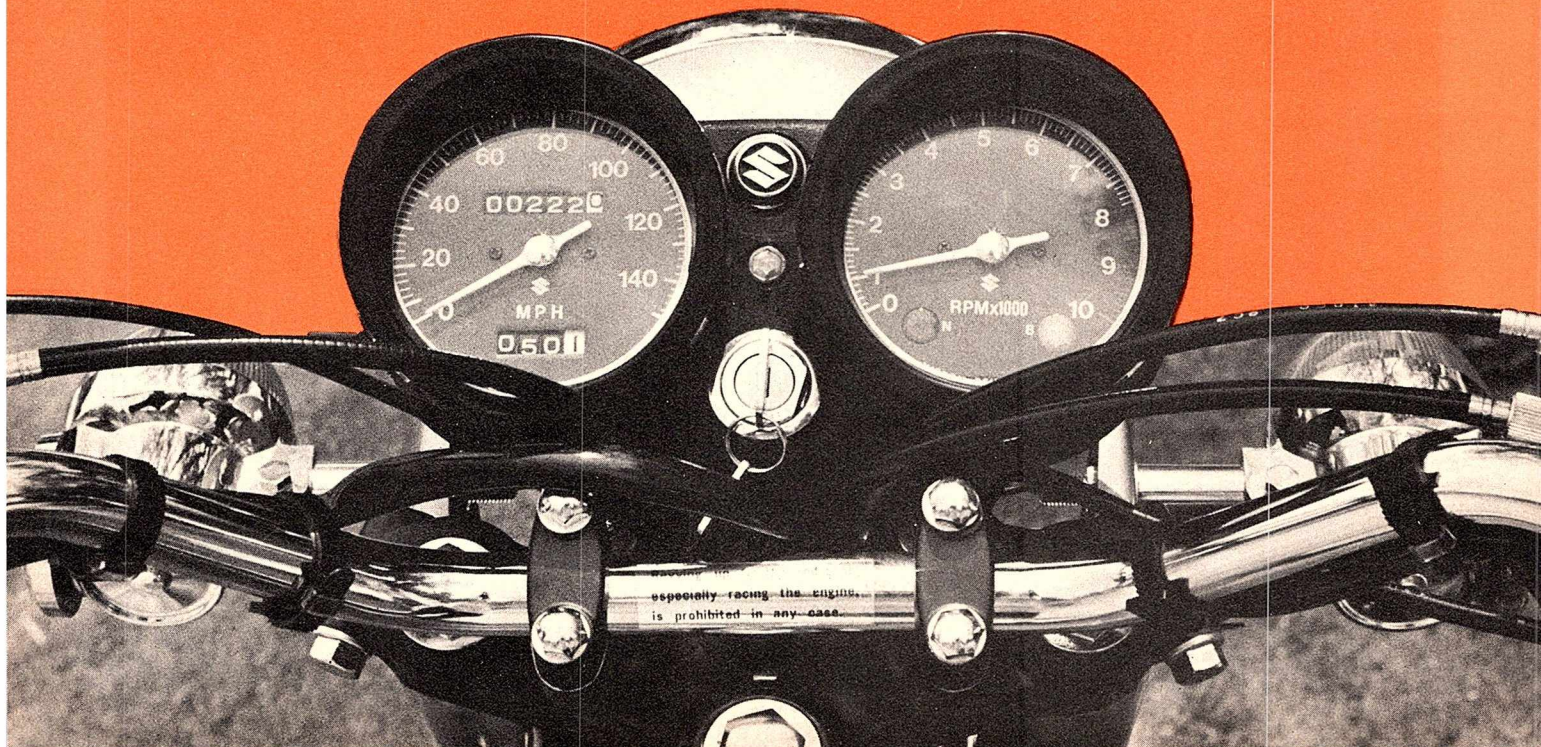


the market gap until their hush-hush power plant is introduced. Of course, anything is possible and the story is a plausible one. Whatever the case, the Suzuki triples are too good to be

called stop-gap designs—and particularly so when the total world market is considered. If the emission standards in this country become too stiff for two-stroke engines, there is

still a great body of potential buyers in countries with little or no such restrictions.

Conjecture aside a close look at the product in hand is worthwhile.





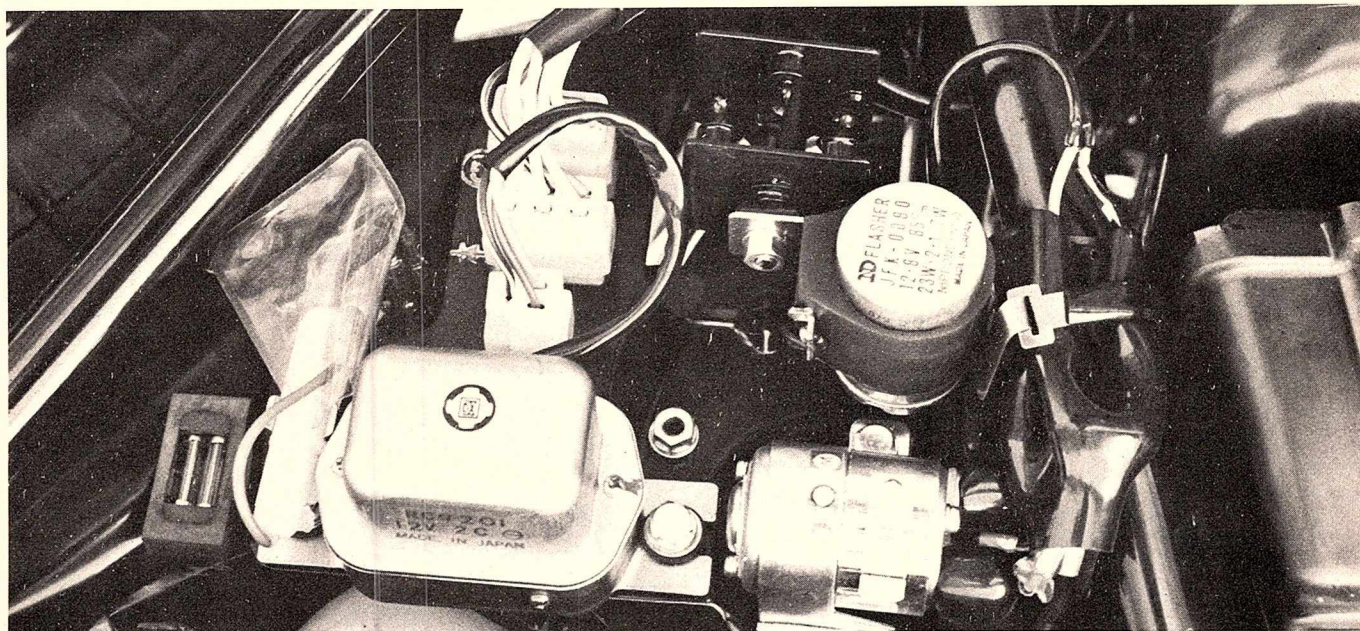
The 550 triple is much like the 750 (1972) in many respects. Four generous low friction bearing assemblies position the crank in horizontally split cases. Connecting rod big ends use roller bearings, and conventional pin bushings are fitted to the upper ends.

Intake, transfer and exhaust timing are piston controlled. The carburetors, three Mikuni VM 28's, draw through a large still-air box beneath

cold starts, when the richening lever is used. As soon as the lever is moved from "start" to the "run" position smoking disappears and the disguise is complete. This clean burning characteristic is accomplished through the use of siphon channels running from the crankcase to the transfer ports. At low engine speeds, oil is prone to accumulate in the bottom of the crankcase. When the wick is turned up the resulting hur-

tract and components a great deal of thought. Not only is instant starting assured every time, hot or cold, but the engine runs clean throughout its range. It will pull cleanly from about 2,000 rpm in fourth gear with full throttle—a situation well beyond the requirements of normal operation.

Clean running is only part of the game; the Suzuki 550 runs strongly as well. Acceleration is brisk and get-



the seat. Intake noise is pleasantly throaty but very low, more reminiscent of a famous four-stroke multi than an almost-as-famous two-stroke multi. Combined with an un-two-stroke exhaust note issued from the Suzuki's three-into-four system, the motorcycle belies its operating scheme at all engine speeds other than idle.

To add to the four-stroke illusion, the 550 emits no visible oil smoke, from idle, through hard acceleration, and on up to sustained high-speed running. The only time any apparent smoke is produced is during

ricane picks up the accumulated oil and burns it along with the regular fuel/oil mixture to produce an oil rich combustion charge which in turn produces smoke.

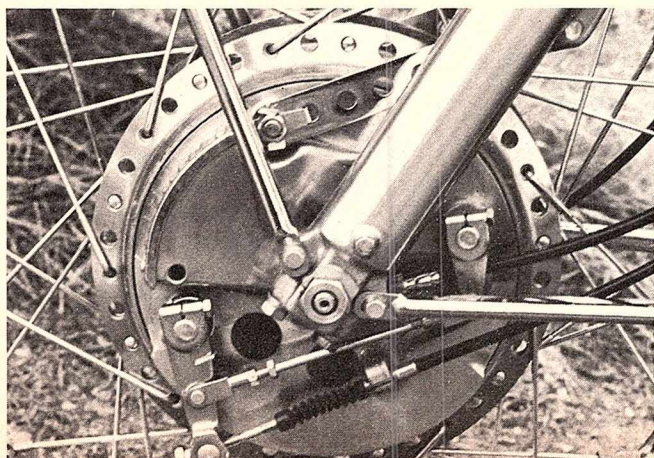
The Suzuki arrangement draws excess oil from the bottom of the crankcase before it has a chance to accumulate, and injects it into the combustion chamber through the transfer port, with successive fuel/oil charges. No great feat, just a nice heads-up type design detail that is not uncommon in Suzuki products.

It's apparent that Suzuki have given the entire matter of the intake

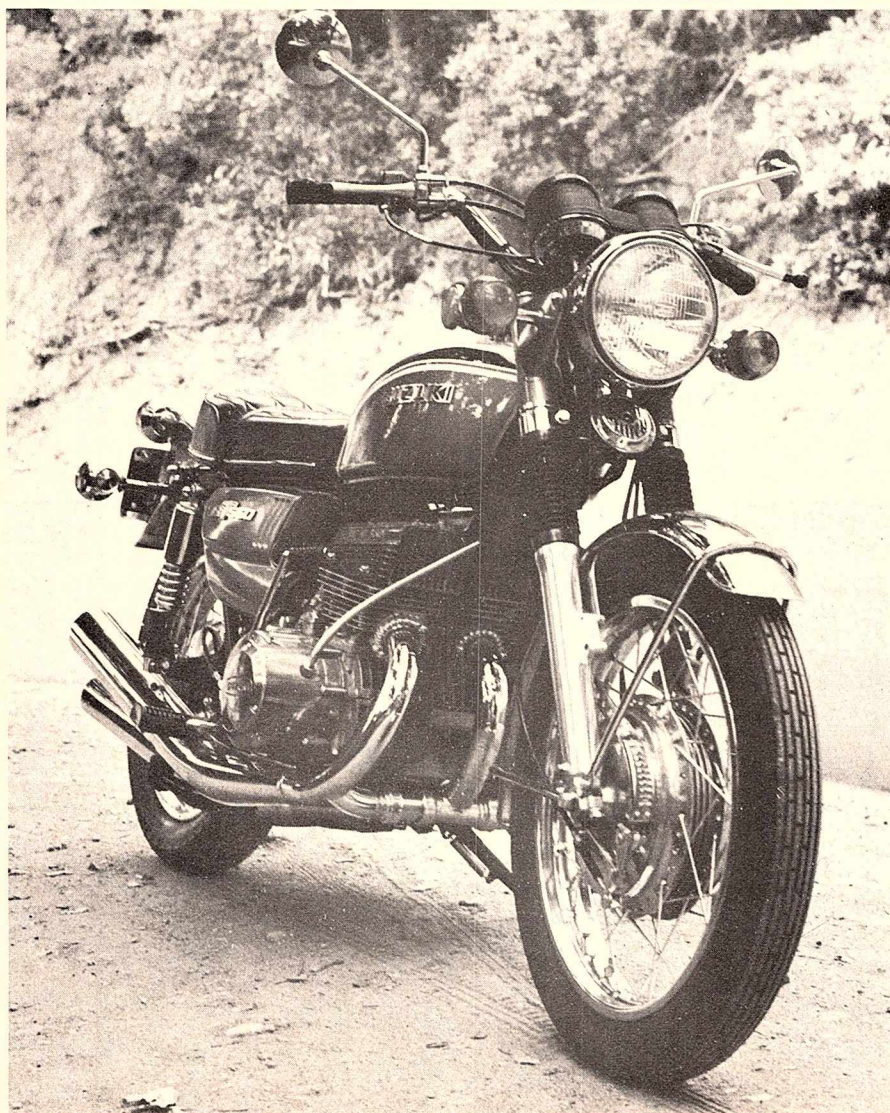
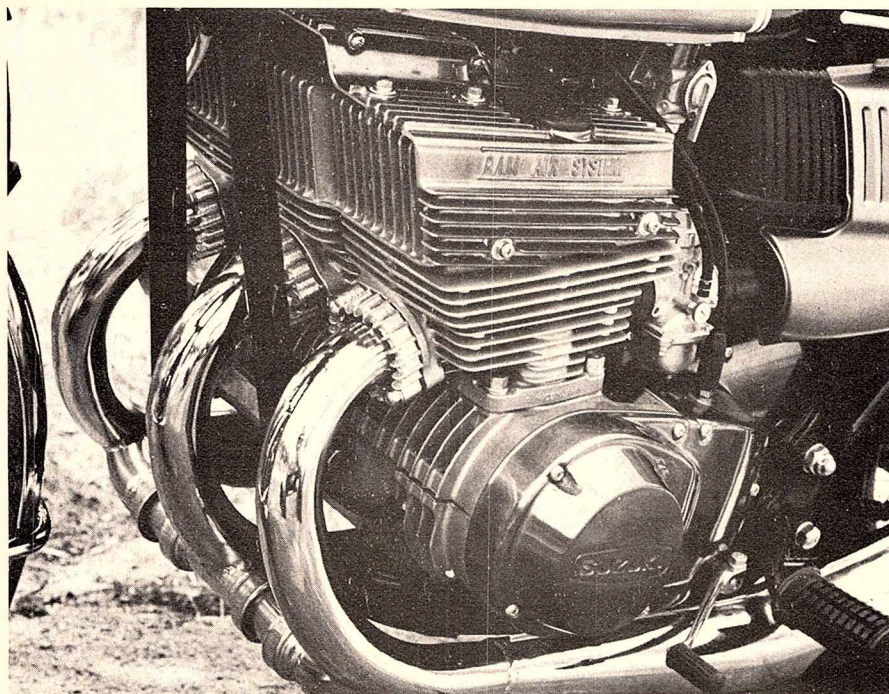
ting it off the mark is simple and assured with excellent progressive clutch feel and a somewhat low first gear.

The 550 utilizes Suzuki's new ram air cooling which is probably as effective because of its increased dissipation surfaces as it is from the ram effect. No matter; engine overheating does not trouble the model.

High-speed highway and freeway running are most pleasant on the 550. Long grades have little effect on velocity when riding solo. The same situation with a passenger is quickly compensated for by a shift







back to a very close fourth gear. Riding position is good. Bars-to-seat-to-pegs relationship favors average to large types. Much of the overall "just right" feel that seemed to be universal with us can be credited to excellently shaped handlebars. Strange how little things like this can make such a difference. Major controls are well positioned and require no hunting.

The 550 frame adheres to what appears to be an industry trend in emulating the late lamented Norton (old type). The front down tubes tie into the steering head near its middle. The tubes descend beneath the engine and then swoop up behind it to tie into the top frame/subframe tubes. This portion extends from the lower end of the steering head back beyond the rear shock mounts. It's triangulated with the forward frame section by two diagonal members which run from the shock mounts down to a point immediately aft of the swing arm pivot. Complete triangulation of the main frame and steering head is provided by a large diameter tube between the top of the steering head and a crosspiece at the frame mid-section.

Both the swinging arm and frame are liberally gusseted and feel just as rigid as they appear. Weld appearance is good, if not perfect, and we can only guess that it's technically good, as we've come to expect from Suzuki.

Small control design, placement and operation is excellent. Frequently these bits and pieces have a terrible proprietary look but such is not the case with the switches and levers on this model. Instrumentation is excellent, although the speedometer seems optimistic. The tachometer is responsive and closely approximates what seems to be going on beneath the fuel tank at any given time. The warning lights are all very bold and even the amber directional indicator can be seen clearly in broad daylight.

So much for those things that are good about the Suzuki 550. What about its faults? First, there's the matter of brakes. Good brakes are essential to transportation motorcycles, and if this is true in the general sense it is compounded for the very fast superbikes, the category to which the 550 belongs. The 550 does not have good brakes—not totally. The front brake is good, as good as a shoe and drum brake can be. A

(Text continued on page 78)



# MAKE SUZUKI MODEL GT-550J INDY PRICE AS TESTED \$1,201.32 MAXIMUM SPEED AS GEARED 110 mph WEIGHT 474 lbs. WET: Fuel Tank 2/3 Full

Distributor ..... SUZUKI MOTOR CORP.  
13767 Freeway Drive, Santa Fe Springs, Ca. 90670

## ENGINE

Engine Type ..... 3-CYLINDER, 2-STROKE  
Bore ..... 2.40 INCHES  
Stroke ..... 2.44 INCHES  
Displacement ..... 544cc  
Compression Ratio ..... 6.8:1  
B.H.P. at R.P.M. .... 50 AT 6,500  
Carburetor ..... (3) VM 28  
Ignition ..... BATTERY/COIL  
Starting System ..... ELECTRIC  
Lubricating System ..... AUTOMATIC (CCI)

## FUEL AND OIL

Oil Capacity ..... 3.2 PINTS  
Oil System ..... INJECTED  
Fuel Capacity ..... 4 GALLONS  
Fuel Recommended ..... PREMIUM  
Approximate mpg ..... 46

## FILTERING SYSTEMS

Air ..... PAPER  
Oil ..... SCREEN  
Fuel ..... SCREEN

## FRAME

Frame Type ..... DOUBLE CRADLE  
Weight Distribution ..... FRONT: 49%, REAR, 51%  
Wheelbase ..... 55.3 INCHES  
Ground Clearance ..... 5.9 INCHES  
Peg Height ..... 12 INCHES  
Seat Height ..... 31 INCHES  
Handlebar Width ..... 29.5 INCHES

## SUSPENSION-TYPE

Front ..... TELESCOPIC FORK  
Rear ..... SWING ARM

## SUSPENSION-TRAVEL

Front ..... 5.5 INCHES  
Rear ..... 3.0 INCHES

## DRIVE TRAIN

Clutch Type ..... MULTI-DISC, WET  
Primary Drive ..... GEAR (2.343:1)  
Countershaft Sprocket ..... 16 TEETH  
Final Sprocket ..... 40 TEETH  
Final Drive ..... SINGLE ROW CHAIN (2.50:1)  
Gear Ratios ..... Internal ..... Overall  
1st ..... 2.846:1 ..... 16.67:1  
2nd ..... 1.736:1 ..... 10.17:1  
3rd ..... 1.363:1 ..... 7.99:1  
4th ..... 1.125:1 ..... 6.59:1  
5th ..... 0.923:1 ..... 5.40:1

## TIRES AND WHEELS

Front ..... 3.25x19 RIBBED  
Rear ..... 4.00x18 TRIANGULATED BLOCK

## IMPRESSIONS

	Poor	Good	Excellent
Throttle Response		●	
Acceleration		●	
Power Band			●
Starting			●
Engine Noise			●
Muffling			84Db(A)
Vibration			●
Handling	* ●		
Choice of Tires		●	
Suspension		●	
Rider Comfort		●	
Transmission	* ●		
Instrumentation			●
Lighting			●
Toolkit		●	
Paint and Chrome			●
Styling			●
Mileage		●	
Braking	* ●		

\*See Text



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1806	White	Blue/Red
1807	Yellow	Black
1808	Gold	White/Blk



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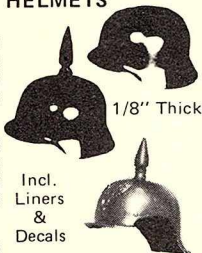
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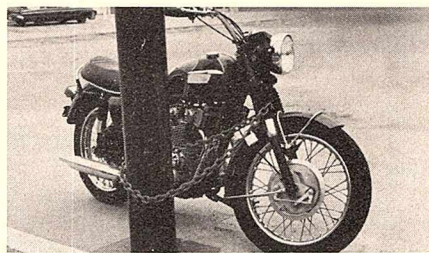
INTERNATIONAL, INC.

2607 Hennepin Ave. S. Dept. S 571  
Minneapolis, Minnesota 55408

## WORTHY OF COMMENT

This photograph is a graphic example of people trying to get into the motorcycle industry who haven't thoroughly researched the market. Assuming someone was dumb enough to buy this chain suitable for hoisting the anchor of a small Queen Mary, just how is he going to carry it along with him?

This product should be recommended for superbikes of enormous displacements because they have the available horsepower to drag along such an item. Even then, regearing may be required. Now, what kind of a container should this weighty problem be stowed in? Or maybe it should have a trailer of its own. It could be useful in a sidecar as ballast when there is no passenger available. Or maybe the idea is to have one of these chains attached to every telephone pole and you just ride up and lock on.



Close examination shows the lock (the largest key operated type we've seen) presents about half the problem to a bolt-cutter that the chain does. Ah yes, progress marches on. Coated with vinyl to prevent damage to cycles, I wonder if a trust is included for those who may get a hernia lifting the thing!

## WORLD CHAMPIONSHIP WRAP-UP

Sometimes I can write about something that's very close to my heart. I can speculate that Joel Robert and Roger DeCoster have more than one-million fans in this world of motorcycles, I happen to be one of them.

These two Belgians are from different sides of the tracks as we in this country would crudely state the situation. Roger had a few more advantages than Joel. (Although the average American motocross kid generally starts with the latest machine and all the riding goodies, their European counterparts work years to reach that level.) It was the country boy Robert who first won a world title, that was in 1964. Roger didn't get his until 1971, and he repeated the title in '72 I am happy to announce.

There is a lot of national pride within the countries that manufacture motorcycles, they would like to have the World Champion come from their country. Roger, Joel, and Sylvain Geboers for that matter come from Belgium, a country that hasn't

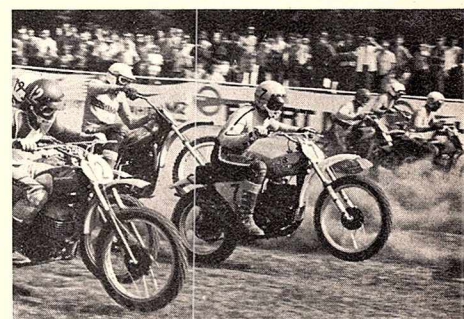
# UPON THE PEGS

With  
Dave Ekins

produced motocross machines since they were children. So when riding for other European countries you don't get the very best if you're a foreigner (even if you are the World Champion). That machine is reserved for the promising youngster or faded ex-World Champion.

The Japanese think a bit differently, their game is winning, and if it takes a foreigner to do it, they'll back him to the fullest. Joel came to Suzuki with three titles in his hip pocket. Roger was still campaigning CZeds and finished fourth in the 500cc title hunt ahead of all the other CZs, **without** factory support. Joel paved the way for Suzuki to pick up his countryman, and Roger snared the title during their 'development' stages of 500cc world motocross competition.

With four of the 250cc rounds left, Joel Robert became a six-time World





Champion in the 250cc chase by winning the Russian GP and making it virtually mathematically impossible for anyone to beat him.

Joel broke his first time out in Spain for a DNF, finished second in the Czechoslovakian GP when his frame parted (he had to carry the 185-pound motorcycle 300 yards across the finish line), and won the other six. With Joel's ability, Suzuki has won its third consecutive manufacturer's championship and as many individual world championships. This feat has never been accomplished in the 11-year history of 250cc Motocross Grands Prix.

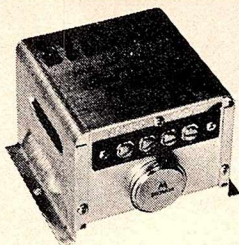
Roger DeCoster's second place finish in the East German GP wrapped up his second consecutive 500cc title with two rounds yet to be fought out. Roger has five first place finishes, two seconds, and one DNF which also puts him in an untouchable position. He only needs to start the next two meetings in order to fulfill his contract obligations, but being the competitor he is he will be as fierce as ever.

With stiff competition from Husqvarna and Maico, Roger's wins were hard fought. Heikki Mikkola, the Finn on a Husky, remained within striking distance of Roger through most of the season (he won in Switzerland and Czechoslovakia). It wasn't until



the Finn's DNF at the British round that Roger had a little breathing room. Just a little was about all because Ake Jonsson, riding a Maico, wasn't that far behind. But Ake, with no wins, had to sweep the last five meetings beginning with the British round if he were to salvage the title, an impossible situation as he lost to DeCoster by one second in England.

With this win DeCoster gave Suzuki its second manufacturer's championship in addition to the individual championship. Whether the duo from Belgium ride for Suzuki next year or not is yet to be answered. It's even questionable that the Hamamatsu Works will even contest the Grands Prix since the FIM's weight regulations will be in effect. So, for those of us who want to get a look at the fabulous Belgians and their unbeatable Suzukis in action, this winter's Trans-AMA series may be our last chance . . . ever!



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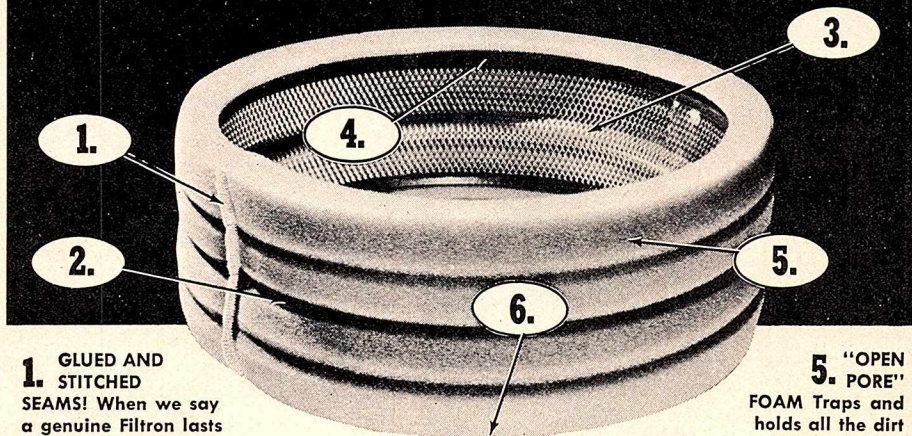
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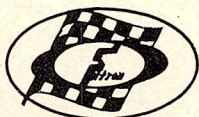
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# book review

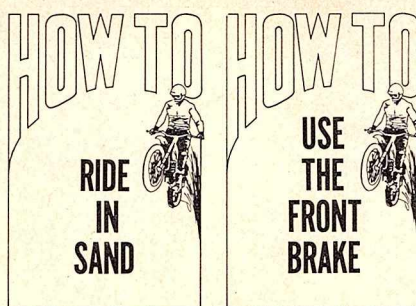
## HOW TO RIDE IN SAND

By Jack B. Watson

Published by  
Barnard Publications;  
28 pages; price: \$1.00.

Jack Watson, creator of some of the most interesting "how-to-do-it" books in the field of motorcycling, has put pica to paper and come up with a pair of booklets devoted to two seemingly simple aspects of motorcycling.

First published in April of this year, "How To Ride In Sand" will probably be of most interest to riders



who do their cowtrailing in the western portions of these United States. Sand you ride on seems to be found in diminishing quantities as you travel from the West Coast to the East Coast. Regardless, the ability to ride in deep sand is something that every rider should possess in his motorcycling bag of tricks.

Watson's book on riding in sand contains all the information necessary to turn any rider into an experienced sand master, along with some tips and advice that can save wear and tear on the bike.

The book is divided into eight chapters which cover every aspect of riding in the sand. Included are tips on tire pressure and the types of tires best for riding in sand, how to steer in deep sand, how to get started if you have bogged down in

deep sand, and how to utilize any berms that may have built up along the trail. Quality photographs illustrate the more important points made in the text.

## HOW TO USE THE FRONT BRAKE

By Jack B. Watson

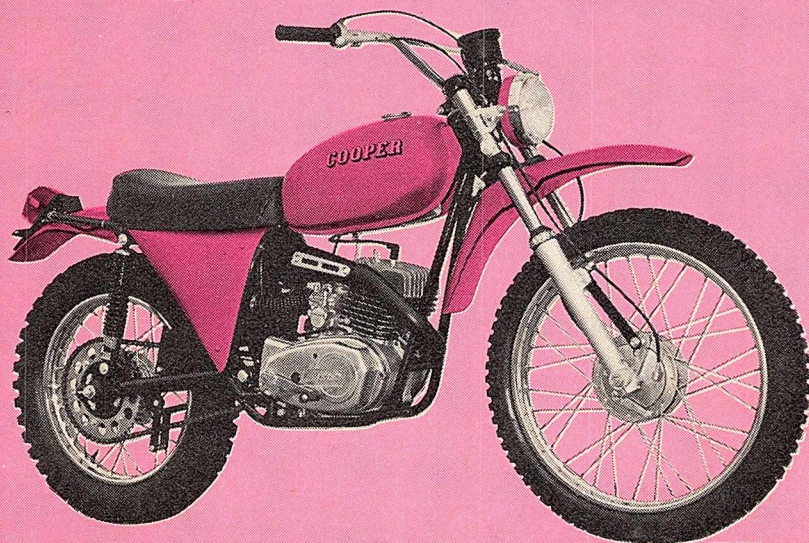
Published by  
Barnard Publications;  
28 pages; price: \$1.00.

The information contained in "How To Use The Front Brake" can be utilized by both dirt and street riders. The booklet explains why the front brake is so important on a motorcycle and then goes on to describe the three types of brake most commonly found on today's motorcycles. Again, quality photographs and drawings illustrate the text of the book. The author has devoted considerable time and effort to shed light on a seemingly simple aspect of motorcycling. The material contained in "How To Use The Front Brake" will be of use to all but the most professional of riders.

Both books contain more information than the seemingly simple titles would lead you to believe. And, both books come with a complete money-back guarantee.

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# COOPER

American designed, built by Moto Iso — the COOPER features low center of gravity, 10" ground clearance, acceleration equal to most 250 moto crossers, heavy flywheel to keep momentum and traction, 28 HP with wide torque band.

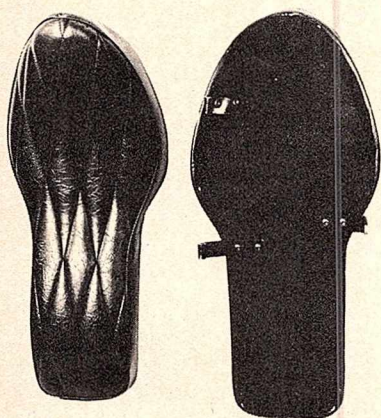
***If your dealer doesn't stock it yet — tell him to get with it . . . or write us and we'll tell him.***

### APACHE LIMITED

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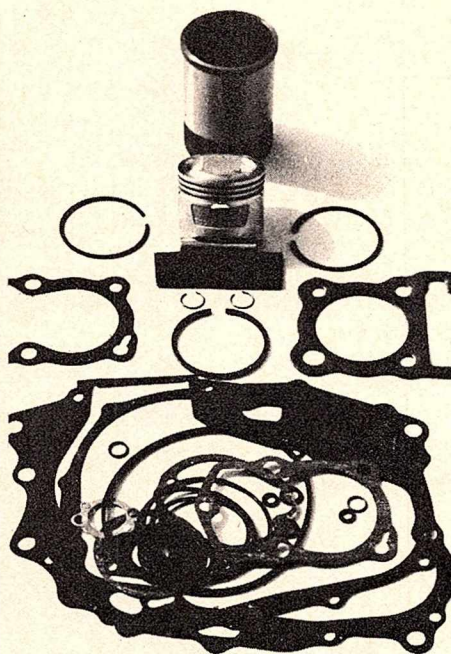
# HOT SET-UP FOR BIKE'N BOD



## 750 CUSTOM SEAT

Instant replacement and a perfect "fit" for the Honda CB750. Note, the brackets are designed to fit frame and no modifications are necessary. This seat is constructed on a 12 gauge steel plate with long-life polyurethane foam padding. It is covered with thick black naugahyde. Thirty-two heavy gauge rivets are used to secure the naugahyde to the plate, and this seat has a felt undercover utilized on the bottom plate to prevent frame scratches.

Available in 2-inch or 4-inch thicknesses at \$39.50 and \$49.50. This item is also available for the Honda CB500. The seat can be ordered by fast mail order from. Suzuki Fun Center, 515 No. Victory Blvd., Dept. MC, Burbank California 91502.



## HONDA KITS

Cycle Products West offers two popular engine kits for the Honda 100. You may choose between a 125cc or a 150cc kit.

The 125cc kit includes machined piston, head gasket, wrist pin, rings, and Teflon buttons. The kit complete is \$34.95. This 125cc kit installed by Cycle Products West is \$77.95. This includes disassembly, cylinder, boring, and reassembly.

The 150cc kit includes machined piston, rings, wrist pin, sleeve, all gaskets and they machine your rod. This kit complete, installed yourself, is \$95.00. Cycle Products West will install the 150cc kit, which includes all labor, machined cases, head and rod, boring cylinder and installed the sleeve, for \$150.00.

For further information or to place your order contact, Cycle Products West, 11900 West Pico Blvd., Dept. MC, West Los Angeles, California 90064.



## SUPER SILENCER

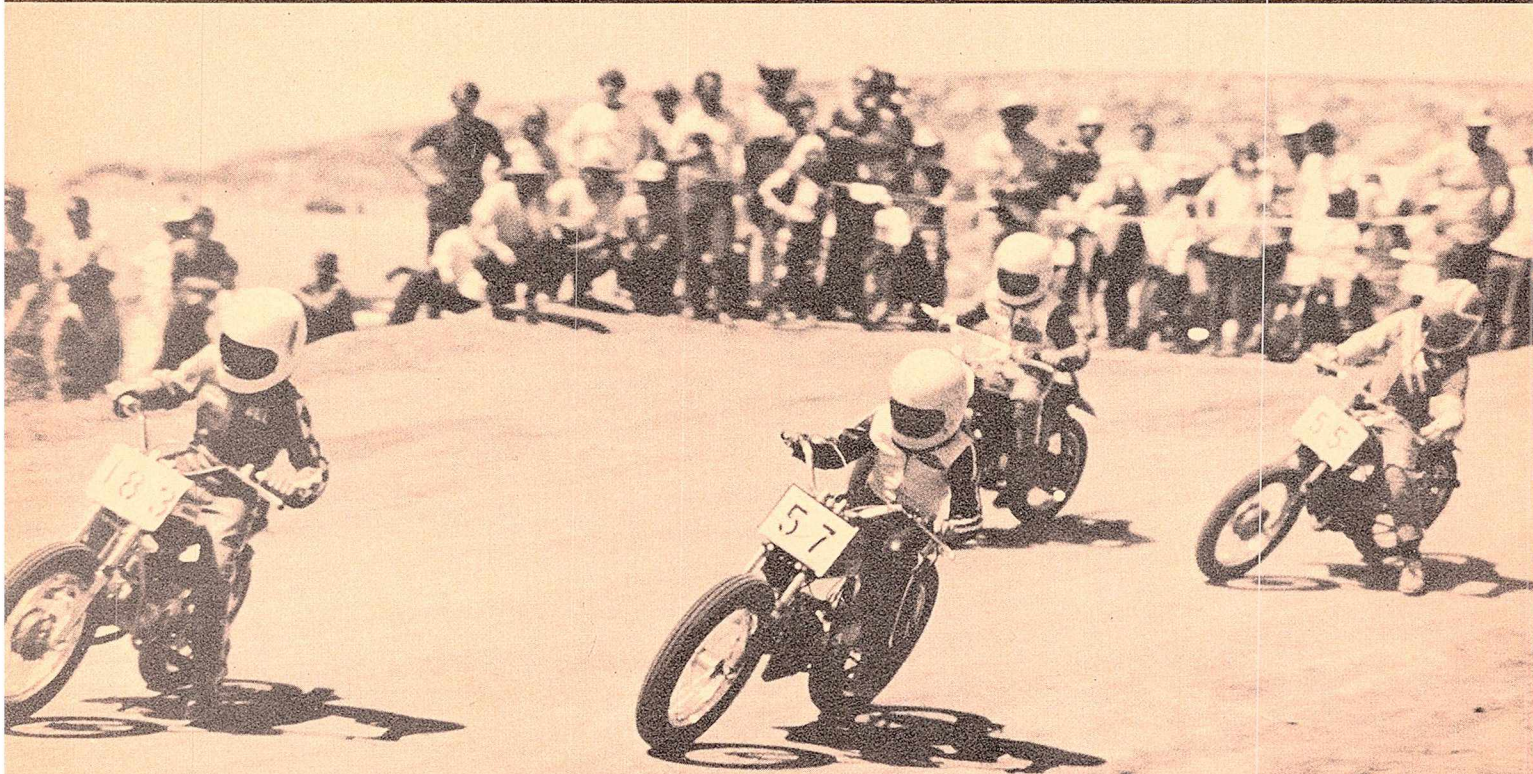
S & S Header Company quietly introduces the Super Silencers. These little mufflers tone down your expansion chamber without reducing horsepower due to a newly designed "tuned louver core." Super Silencers are guaranteed unbreakable and are now available in 3/4" to 1 1/2" inlet diameters (1.574 soon). Quick attachment is with a high quality screw clamp.

S & S Super Silencers also feature a sturdy, good looking removeable end cap for replacing the glas-pack—no special pliers needed. End cap also acts to "center" the muffler core so that it cannot come loose and rattle. And S & S Header Company's new Glas-Pack Replacement Kit is just the thing to keep your muffler in new condition. Perfect for all take-apart mufflers, the S & S Glas-Pack Kit can be installed in minutes. For information, write to, S & S Header Company, 316 East Dyer Road, Dept. MC, Santa Ana, California 92707.



THE DIFFERENCE  
BETWEEN MEN AND  
BOYS IS THE PRICE  
OF THEIR TOYS

# 4th ANNUAL MINI-TT INTERNATIONAL CHAMPIONSHIP



Story and photos by Pete Foster

Where is it all gonna end, and why did it start? Within the bounds of motorcycling, which seem to be endless, a place can be found for every-

body regardless of age or desires, competitive spirit or not. They can find a level of activity and be comfortable with something that involves motorcycles.

Mini-bikes, otherwise known as

those motorcycles too small for full-grown people to manage (they're just right for the tiny folk), have their place among us, too. Consequently a sales boom accompanied the introduction of these true miniature mo-



motorcycles which in turn created the availability of similar machines from Japan, Taiwan, Italy, and the U.S. Although not as expensive as their larger counterparts, the mini-bike is certainly not cheap. It's a motorcycle with all the features of those full scale jobs, and like the big ones, full scale racing has slipped into the picture.

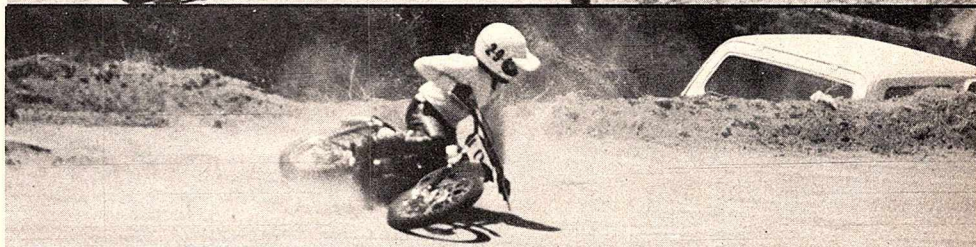
Governed by the Southern California Mini-Bike and Kart Association, mini-bike racing in that part of the country has grown into its own. The governing body has set down a simple set of rules keeping just three things in mind; safety, classification of entrants by age and machine in order to promote good racing, and having fun for both the parents and kids.

Roughly, the age limits separate between 11 and 12 years, and the bikes fall into displacement categories at both sides of 75cc. So one Class A race would be for machines up to 75cc with kids up to 11 years (but under 12), another would be for kids over 12. Class B encompasses bikes 76 to 125cc with neither age nor engine modification restrictions. 12-year-olds and over do not ride with 11-year-olds and under, even though their machines are in the 75cc and under Class A category. By keeping the kids within the same age groups and cc displacements they have some pretty lively races. The above falls into mini-cycles which are machines with a minimum overall length of 60 inches and a maximum of 70, and wheel sizes from 13 to 16 inches.

Then there's mini-bikes; maximum overall length of 60 inches with a wheel size maximum of 12 inches. Within this category are Class A, B, and C. Using go-kart rules from which this organization originated, mini-bikes are broken down into horsepower groups. 3.9, 4.0 to 6.9, and modified things over 7 horsepower on up to 125cc. Can you imagine a 20-plus hp 125 in a five-foot overall motorcycle with 12-inch wheels? Wild!

The racing is pretty far out, too. They used up two solid afternoons at Saddleback Park to run off fifty heats and three final races. Each heat had five or six riders on the starting line, and each entrant was allowed two heat races to run in each day. An arbitrary point system is used to determine those that go into the finals, but each race is important, a battle from start to finish.

There's factory help and more pressure on a youngster than many times should be put there. But it's competitive, and the boys with the







most talent and desire usually end up winners. However, it's not all a boy's show. One Renee Payen, with long locks flowing out from beneath her helmet and a firm grip on her Honda, won a few heats against the guys and progressed to the semi-final mini-cycle 12 and over where

she ended up 4th. They do have a Powder Puff class for girls that want to act like girls and one of them, a second place finisher, was Terri McQueen (she's got a famous daddy by the name of Steve). Her brother Chad also pulled a second among his peers.

This was the fourth Mini-TT, and by all the shouting and cheering that went on, not to mention a large turnout of people and machinery, the whole mini-cycle racing picture is on an upswing. What is it they say? The difference between men and boys is the price of their toys? ●



The purpose of this column is to use and evaluate bolt-on accessories which our readership may be interested in. It can be fairings or handlebars, oil coolers or decals; whatever, if it looks promising we'll give it a try.

Sometimes, for one reason or another, a motorcycle loses its chain. Usually, this is simply the result of plain neglect on the part of the motorbike's keeper. Once in a great while it happens to be the machine itself. Consequently, when there's a need there's a cure, and the cure in this case is the Chain Mate; a chain tensioner.

Chain tensioners are primarily used on English trials motorcycles to smooth out the shock from slack chain to tight chain; that's what happens when you turn the throttle on and off abruptly. On trials iron you'll even find a chain tensioner on the primary besides having one on the secondary chain.

It all comes in a box for slightly less than \$20.00. The very obvious weld on the Chain Mate's body is a Modern Cycle modification for our particular application. We made it one-inch shorter in order to utilize an existing mounting bracket on the motorcycle.

# NEW PRODUCT EVALUATION AND APPLICATION THE CHAIN MATE

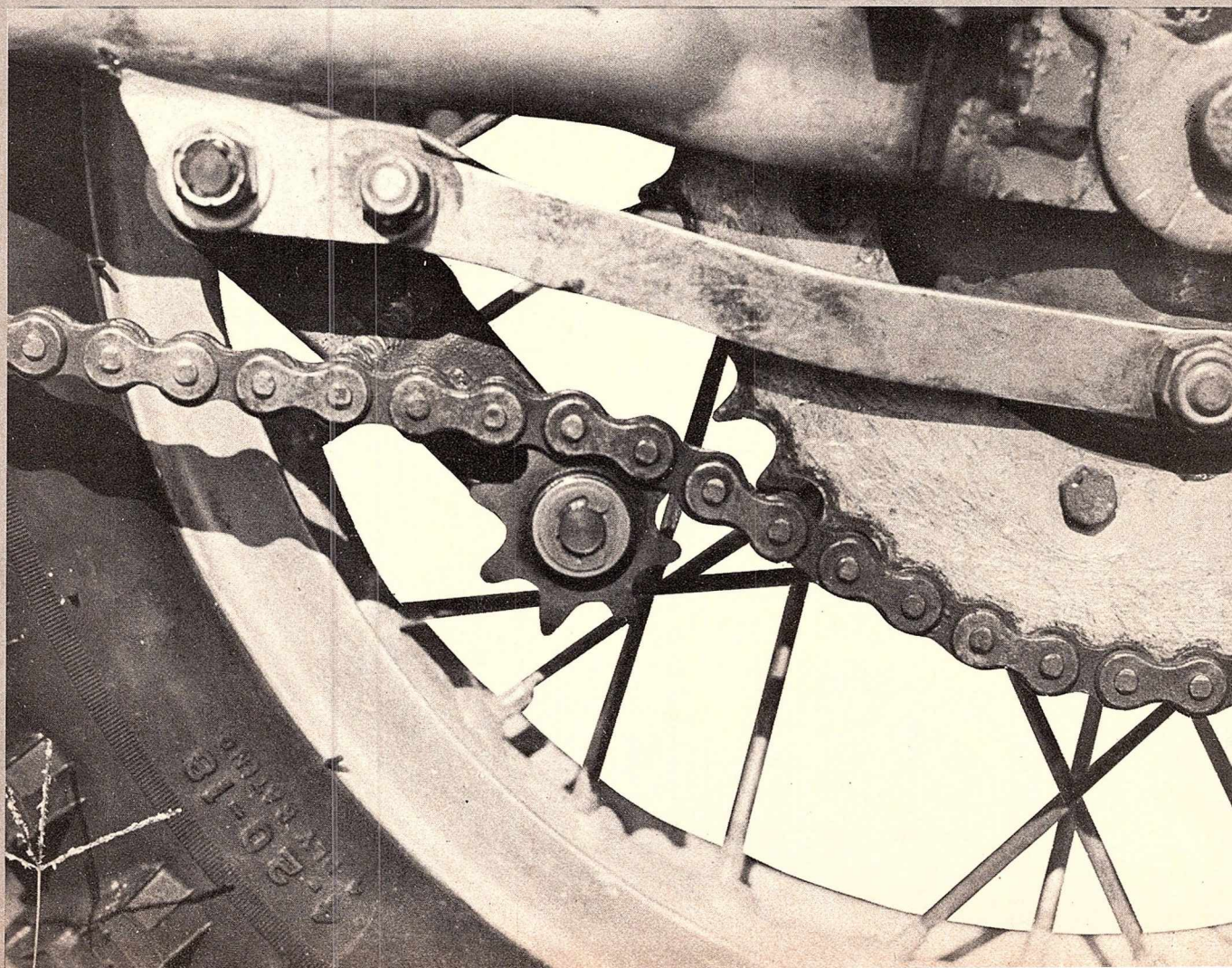
A very loose chain is more apt to jump off its sprocket than one properly adjusted. In fact, if both sprockets are in alignment the chain shouldn't have any reason to derail itself, it generally takes outside assistance like a branch or something.

Unfortunately, swing arm-type motorcycles, because of the geometry involved in their construction, will fluctuate chain slack with its normal movement in the suspension units. Misalignment, another cause

for derailment, is not so common and is something caused by the swing arm twisting under severe loads. We found all of these problems cannot be cured just by installing the Chain Mate, but it will keep the chain from falling off.

The kit is pretty well thought out and comes complete with mounting brackets. Our application dictated the use of an already existing bracket currently welded to the swing arm of the motorcycle. In order to utilize this part we had to shorten the Chain Mate one-inch in the middle. We elongated the hole using a rat tail file. A coil spring is used to pre-load tension on the chain and has the mechanical disadvantage of being wrapped around its own fulcrum, or pivot point. After some experimenting, we pre-loaded this one a full turn and it worked great.

Chain Mate is made of first class material, the main arm is a steel forging. The 8-tooth steel sprocket runs in a sealed ball bearing and its fulcrum is bushed. We would prefer the mounting be welded to the swing arm, and in this fashion we recommend it. It worked for us in a recent 125-mile National Championship endurance, it should work for you. ●





Along with all the blood, sweat and tears involved in putting together a monthly magazine dealing with the total picture of motorcycling, there are also some rewards. We get to ride lots of motorcycles. We see a lot of races, travel abroad a bit, and get free copies of our own magazine. And we can always look forward to Christmas in July (or August or September), for this is the time when the manufacturers and distributors reveal their offerings for the following year to the assembled press.

Generally speaking, there is almost always something in any given line-up to excite and interest us sufficiently that it can be felt that the time spent away from riding and writing is not a total waste. And even if the machinery were not worth a second look, the showing itself can be counted on for putting an afternoon of fun into one's life. In fact, the play

has indeed become the thing, and if the new models are interesting so much the better.

Press showings are important to the distributors and manufacturers; they strive to create a wave of interest in their new products that begins with sufficient energy to carry it to the public and prompt them to want to know more. And the press showings are important to the press, because much of our test planning is based upon what we feel to be the big-news models for the year. Never is there a better opportunity for gathering information than at this time, when the press information kits are fat with words and pictures and the technical staffs are assembled, sans tools and engrossing projects, eager to talk about the results of their past year's efforts.

A good dog and pony show should: a) present interesting product; b) be

informative; and c) be entertaining. Kawasaki's recent effort met the criteria, in spades, added a few wrinkles of its own and turned out to be a great dog and pony show.

Kawasaki held their showing in conjunction with the three-day road racing orgy leading up to the Superbike International. Logically the show and race shared the same venue—Laguna Seca Raceway near Monterey, California.

The problem attendant to staging a press showing of this type are manifold; and to undertake such a task several hundred miles away from one's home base and the stomping grounds of your audience is absolute madness. To Kawasaki's credit the show was well planned, well executed and came off with nary a detectable hitch. As though we were expected to check their work, Kawasaki handed out printed itineraries at the beginning of the day.

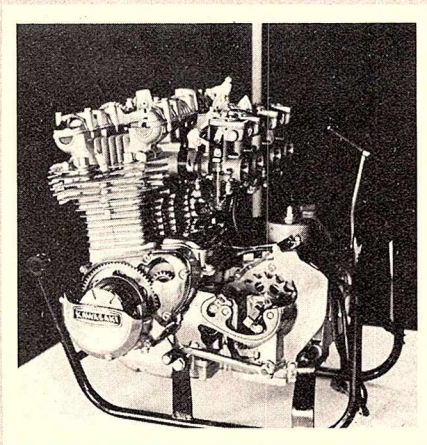
### 8:30—Plane Leaves For Monterey

Rallying point was the West Imperial Terminal at Los Angeles International Airport. This is a grand sounding name for something that more closely resembles a refugee relocation center than an airport terminal. International charter flights depart here, and at almost any time of day one can hear man's innate fear of flying expressed in several languages. In addition to the back-to-the-old-country flights, non-scheds ('When's your next flight to Seattle?' 'When can you get here?') and other charter lines use this facility. This results in an interesting display of aircraft types, vintage, condition and paint schemes. The absence of visual order and the motley appearance of some of the planes and crews does nothing to bolster confidence in one who is distrustful of man-made winged things.

Our magic carpet was a hand-painted Lockheed Electra Turbo-Whiz with a noticeable vibration that occurred only between 500 rpm and redline, ably staffed by over-the-hill stews and a round-the-bend crew who took turns at the helm and served an exotic hot beverage made by boiling acorns and olive pits. Happily the trip was uneventful.

There was a predictable spate of high-jacking jokes and one liners ('Hey! Turn this thing around and take it to Beatty.'), along with little known, unwelcome facts about the airplane's history ('Did you know this thing was designed so that only two bolts hold on each wing?' Whatever for?). Somewhere approaching the point of no return we were treated to

## THE FIRST EVER TROPE-COR-KAWASAKI INTERNATIONAL SUPERBIKE DOG AND PONY SHOW THAT'S GREEN



By Mike Bishop



autographed pictures of Yvon Du-Hamel, signed in what appeared to be crayon.

### 9:30—Landing Monterey Airport

This was the first of the day's two most important milestones. We're pleased to report that it was an unqualified success; we walked away.

### 10:00—Arrival at Tent on Race Track

Here the itinerary becomes a little vague, and for good reason as we were to soon discover. Between LANDING MONTEREY AIRPORT and ARRIVAL AT TENT ON RACE TRACK a surprise competition was staged. The game was simplicity in itself. Of the two buses enlisted to effect the ARRIVAL AT TENT ON RACE TRACK only one was correctly geared to climb hills with a load. Can you guess which one? Was it Bus A, or was it Bus B? If you guessed incorrectly (Bus A), walk one-half mile to the top of the hill and wait a turn. If you guessed correctly (Bus B), laugh a lot and say clever things to the players who are walking up the hill. The losing players are taking it well. See? There's one showing you a half of a peace sign.

### 10:15—Introductions Begin

Short, sweet and peopled with notables from Kawasaki Motors and Kawasaki Heavy Industries—the parent company. Oh yes, there was a Miss Canadian Something-or-Others imported expressly by Canada's Kawasaki distributor to reign over the festivities as queen. Lovely!

### 10:30—New Model Previews and Question & Answer Period

This is what the day was all about. Dramatically, each of the 1973 offerings, beginning with a mini-bike that folded like a Barlow knife, was uncovered, identified and ballyhooed in turn. Tension mounted as each bony apparition was revealed to be a newer, stronger, faster, more sensational version of last year's equivalent newer, stronger, faster, more sensational model. So it continued, right up to the largest, cobbiest pile. Silence. Expectation. Whisk, went the sheet—TA-DUMMMM. Nine-hundred and three cee-cee, dual overhead cam, four-cylinder, four-stroke Behemoth (Kawasaki's word). Remember the Munch Mammoth? Now, the Kawasaki Behemoth. More tricks up its four sleeves than a magician's convention (our words) judging from the ballyhoo. (See the report on the new models elsewhere in this issue.)

Obviously moved by it all, the

audience responded with applause. Author! Author!

The tone of the presentation of the new stuff was that Kawasaki in this country is calling all the shots—the factory is simply developing what they are told. This is an interesting idea, with regard to meeting the needs of a particular market, but it seems odd that a company the size of Kawasaki Heavy Industries would place so much trust in a small product development team, executing their ideas in mass production numbers in a very short time. Whatever happened to the long-range-plan approach that sees most manufacturers working several years in advance of production?

### 11:30—Machines Ridden

This segment was surprisingly bloodless. A small dirt scrambles course had been set up to accommodate the knobbily tired numbers, whilst the road bikes were tooled around a paved circuit that ran across the infield and around a portion of the road race course perimeter. Meanwhile, on the road race course, sidecar wizard Reg Pridmore and one of his cronies were transporting the George Plimptons among us around the circuit aboard a racing sidecar at sufficient speed to provide a clue about the woolly nature of this sport when things really get serious.

With everyone toggled out in look-alike apple green jumpsuits and brightly striped helmets it was difficult to determine just how many times each scribe was travelling around the street bike circuit. A barrier of flesh soon erected itself to ensure that once around was all anyone got. Fair's fair and besides this was no place to conduct exhaustive road tests.

Interestingly, the only apparent jackassery was provided by one of Kawasaki's own, and this by a chap who is sufficiently prominent in and vital to the organization to know better than to engage in such foolishness as making near-miss passes at groups of guests and wheelieing wherever he rode. Poor taste and bad judgment, and a bit of an embarrassment to the notables from KHI, so it appeared.

### 1:00—Buffet Lunch Under Tent Begins

This alone was worth the price of admission. Super prime rib, crab, shrimp, and all manner of delightful foodstuffs, properly prepared by a Monterey restaurant that knows its onions, and all the rest. There were more big eyes in the chow line than

on the starting grid of a Novice race. In the contest of press-vs-food, food didn't have a look in.

### 2:00—Kawasaki Superbike International RR Discussion

Because much of the weekend's racing had been talked about earlier in the day little more was made of it at this point. Instead the program was speeded up as Kawasaki launched into . . .

### 2:20—Introduction of Other New Kawasaki Machinery and Plans

Focus was on new off-road prototypes—two Six Days types and a motocrosser. Enduro and motocross competition are becoming increasingly prestigious world wide, and it is not at all surprising to see Kawasaki's development team deeply embroiled in working out winning machinery formulas.

Their efforts to date look handsome, even promising. The new piston-port single should make the task easier than it might have been with rotary valve units. It's a reasonable assumption that Kawasaki will have competitive production hardware within a couple of seasons—perhaps sooner; they certainly seem to be trying very hard.

### 3:00—Closing of Programs and Viewing Machines, Photos, Interviews, Press Kits, Etc.

The great hoopla machine was beginning to run down, and the guests with it. Enormous press kits were handed out, chock full of 8x10 glossies and many pretty words. The witty banter of a few hours ago was all but gone. Free T-shirts threatened to get the machine going once more, but only for an instant. The circus was over, we were full of cotton candy, hot dogs and peanuts, and it was time to go home.

### 3:30—Board Busses to Airport

The downhill-only bus had been replaced by an up-and-down rated model but no one seemed to care, really. The rest of the day was downhill.

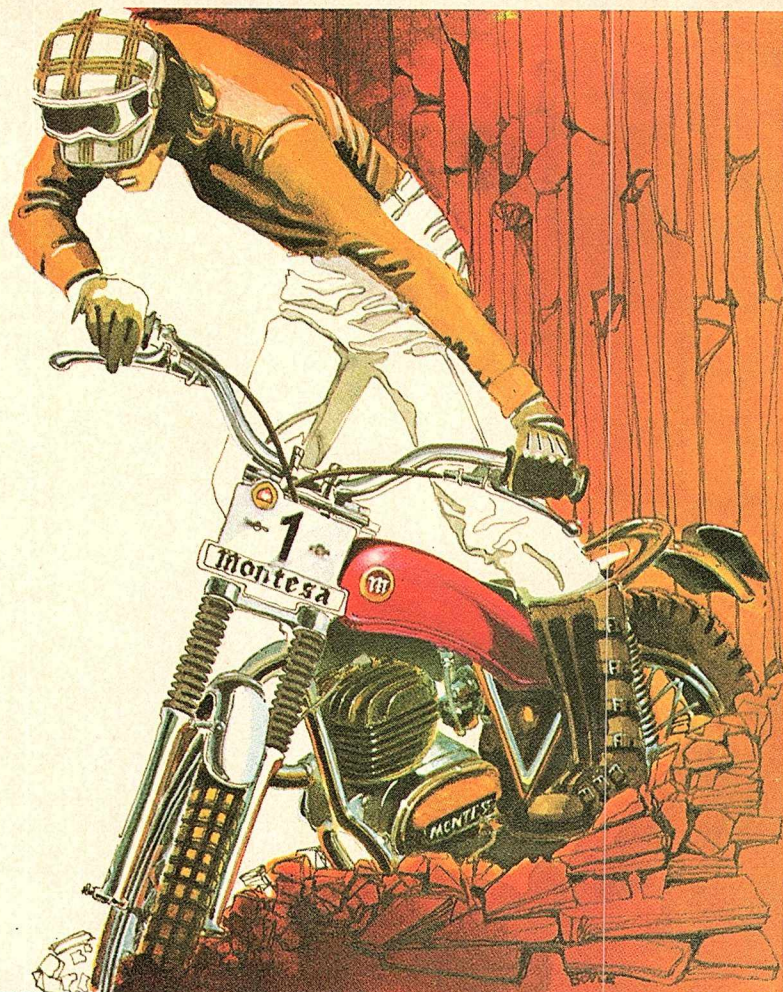
### 4:30—Planes Leaves for Los Angeles Airport

Not true; the plane was winging its way back from another charter at this point. So it was up to the lounge for some flight insurance—on the rocks. Cranky press kids and a surprised barkeep did not hit it off real well. A little grumbling, some bitch-



# unmatched for trials

## COTA 123



Now, Montesa presents a magnificent new lightweight trials machine COTA 123... the culmination of highly successful Montesa trials competition and superb Montesa engineering and craftsmanship.

The new COTA 123 is designed for the professional trialer; but its exceptional balance and handling also make it perfect for the less experienced rider in the challenging new sport of trials.

A new type 125cc engine, specifically designed for the low-end torque requirements of trials, powers the COTA 123 through a six-speed gear box. Starts in any gear. Even the tires are especially designed for Montesa... it's all new... it's Montesa COTA 123. See it at your dealer or write for information.



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A Brand Spanking New  
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# THE SUPER- BIKE

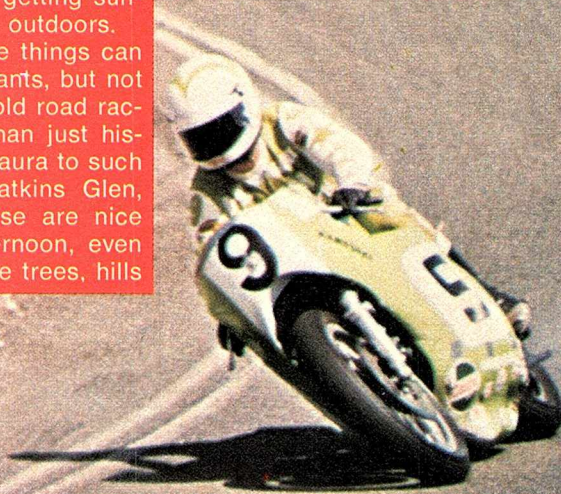
# INTERNATIONAL

It's hard to knock the big, slick racing plants such as Daytona, Riverside and Ontario; they efficiently utilize increasingly precious land to accommodate many types of racing. Their race courses are efficient as well. Turns are precisely banked, carefully radiused, and the entire operations are cared for as well as the Firestone Country Club.

But there's more to racing than efficiency. To the fan a day at the races is a day of fun outdoors, cheer-

ing favorites, noting lap times with a sweep second hand, taking pictures, enjoying a picnic lunch, getting sunburned, and digging the outdoors.

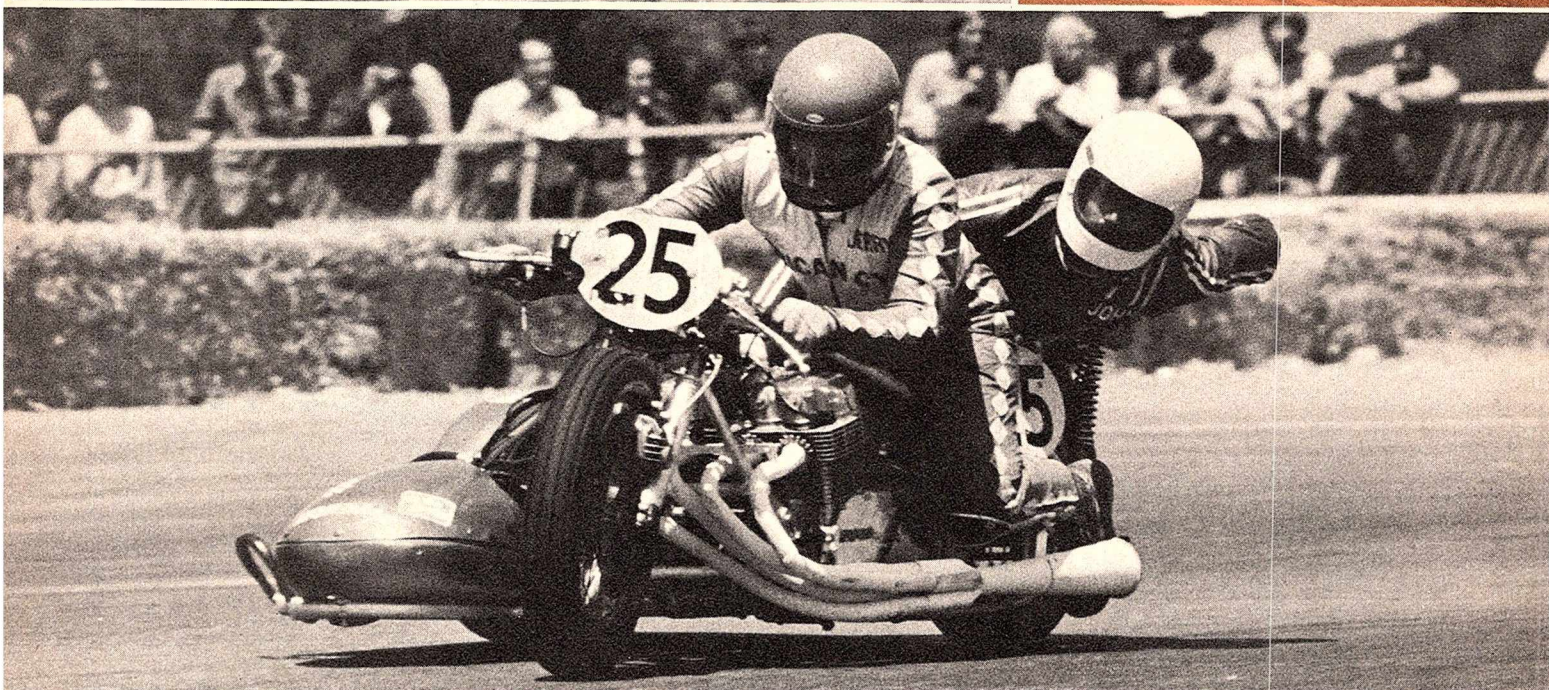
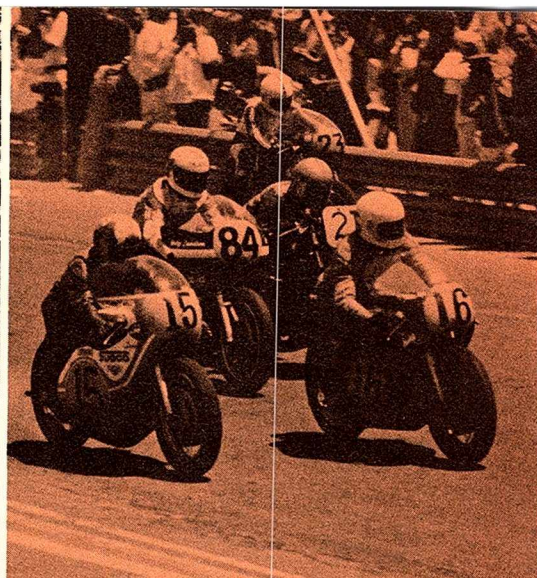
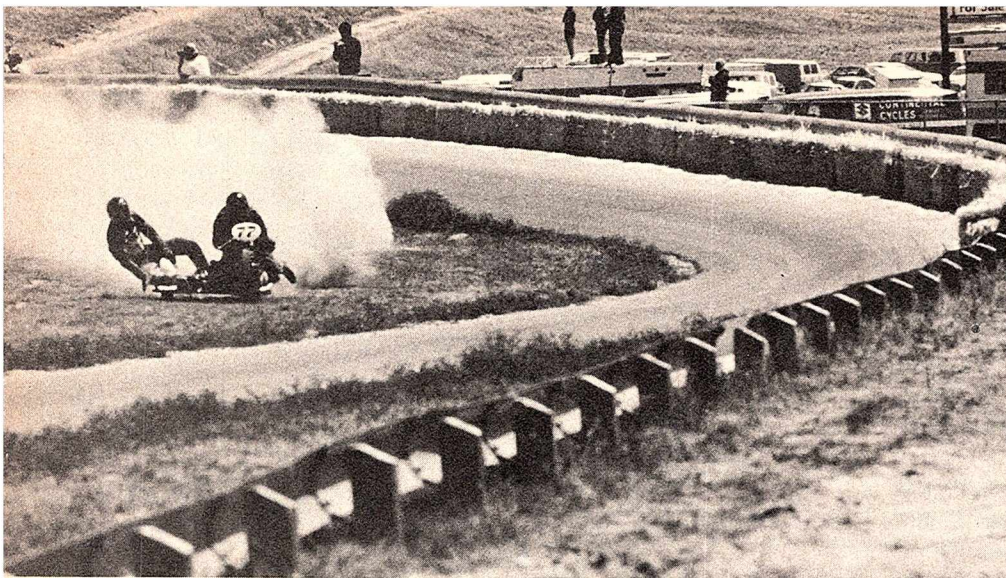
To be sure all of these things can be done at the racing plants, but not nearly so well as at the old road racing courses. It's more than just history that lends a special aura to such places as Limerock, Watkins Glen, and Pebble Beach. These are nice places to be on an afternoon, even without racing. They have trees, hills



Story and photos by Mike Bishop







and places to walk, and generally they're very pleasant.

Add to this list of pleasant race courses Laguna Seca. Located about midway between Salinas and Monterey, California, Laguna Seca is like a large piece of real estate taken right out of John Steinbeck's books, for Laguna Seca is indeed Steinbeck country. Countless oaks crown gently rolling hills which take on the look of brown suede in July. Shade is abundant, particularly in the infield, and it's a good course to hike for an ever-changing view of the action. Laguna Seca is owned by the U.S. Army and administered by a group called SCRAM—Sports Car Racing Association of the Monterey Peninsula. Previously the course was used only four times each year; the new Superbike International raises this number to five.

The planning and execution of this first major event appeared, to our eyes at least, faultless. The Trippe-Cox group, working with Kawasaki

and SCRAM, put together a first-rate weekend of racing complete with international stars, professional teams, sidecars as well as solos.

Throughout the program each event had its drama. The Novice 50-miler win went to the second place finisher when the scrutineers learned that the first place finisher was using an approved but-not-for-his-bike Yamaha front brake on his Kawasaki.

The combined Junior/Expert 50-miler saw a capable Junior Jerry Greene beat Yvon DuHamel and Kel Carruthers to win his heat and then come back in the 50-miler to take fourth behind such senior aces as Gary Fisher, DuHamel and Mike Lane.

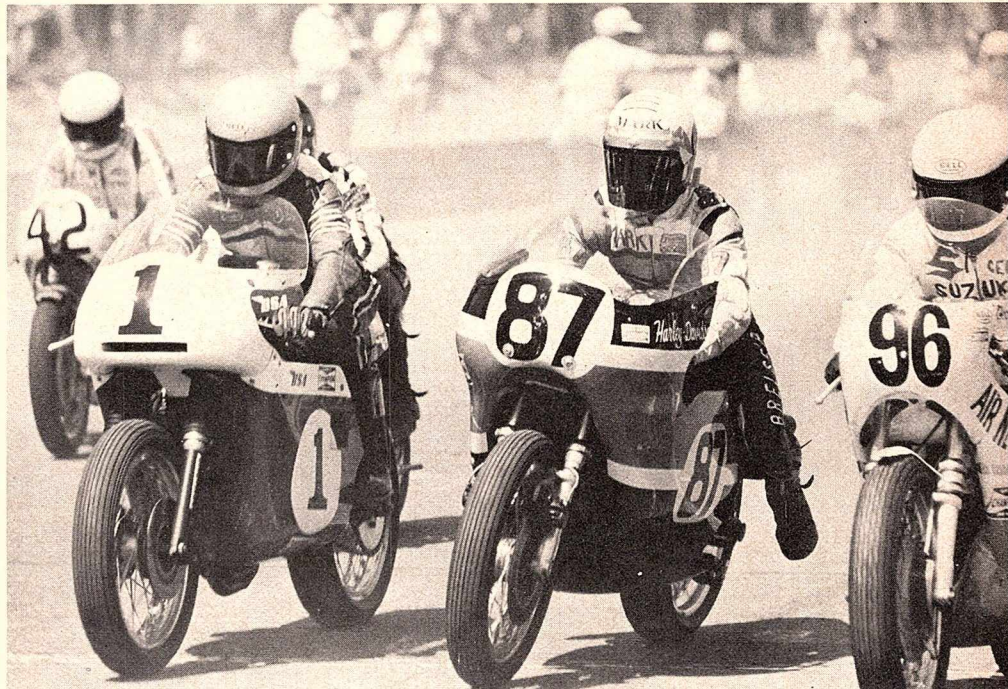
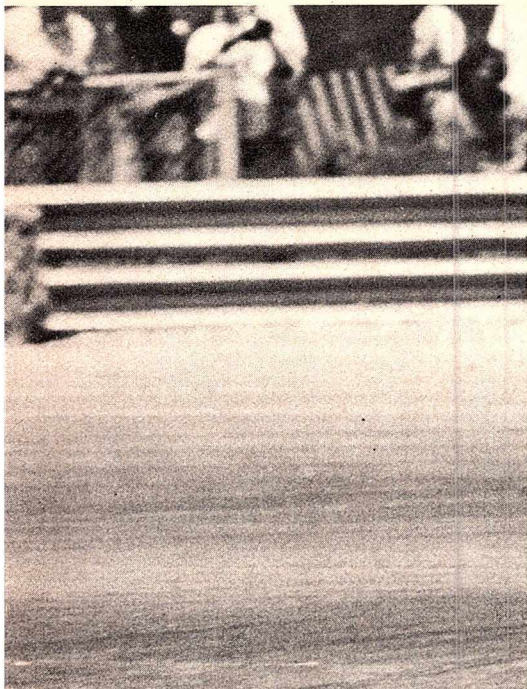
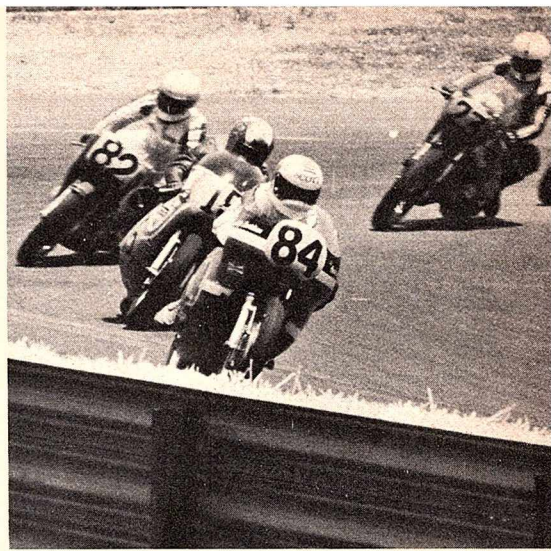
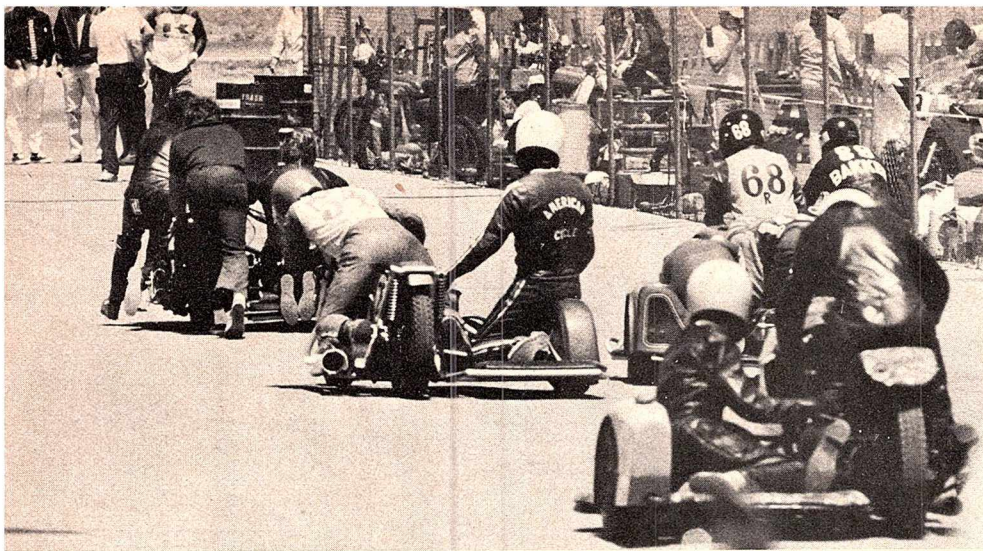
Greene came back for a real piece of the action in the Junior 50-miler with an impressive 30-second margin win on a Kawasaki 500—good for an extra couple of thou' contingency money. Greene's worth watching; he rides like he knows what it's all

about—consistent lines and shift and brake points, cool and decisive in traffic and appreciably faster than his contemporaries.

The premiere event, of course, was the 125-mile go—the "Kawasaki Superbike International." And there were indications—and certainly a great deal of hope—that it truly might be Kawasaki's race. DuHamel won his heat in better time than Cal Rayborn had won his. Team Hansen had done a thorough job of preparation, and with strong "back-up" from Gary Nixon and Paul Smart, only fate could, and did, keep Kawasaki out of the hunt.

The hoped for DuHamel-vs-Rayborn, Kawasaki-vs-Harley duel was dashed in the first lap. Things had not even progressed far enough to qualify the misfortune as a heart-breaker. DuHamel began to take care of business right away, grabbing the lead at the start and immediately pulling away from the pack. Reliable information has it that as DuHamel





exited turn four one of his cylinders went quiet. In a brief instant, in which he looked down at his engine and was inattentive to his direction, he left the course only to be hurtled back onto it—right into the path of his pursuers.

Miraculously the incident produc-

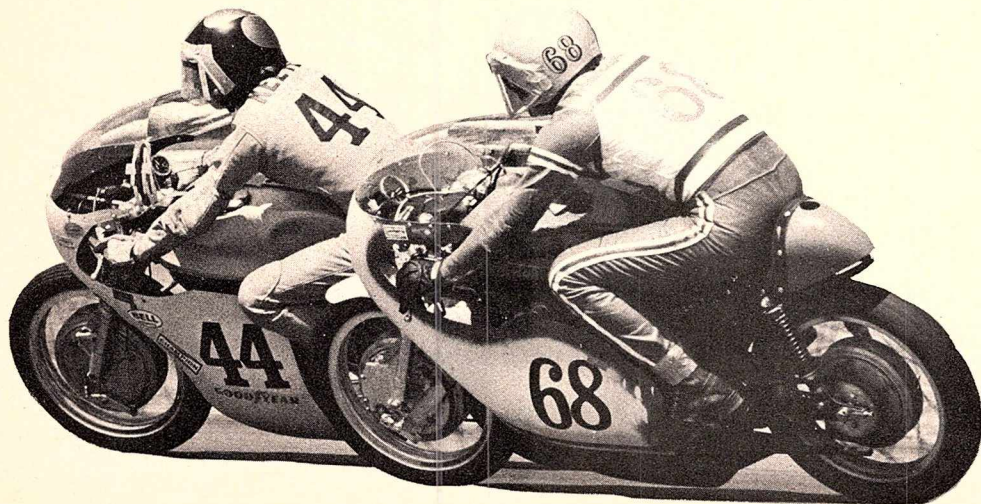
ed only four casualties, none of whom were seriously injured, DuHamel, Dick Mann, Cliff Carr and Jerry Christopher. But the big damage was that suffered by Team Hansen and Kawasaki with DuHamel's untimely departure from the contest.

Quick to capitalize on the shunt,

Gary Fisher took over the lead and managed to hold it to lap 18 when he was overtaken by the man who has shown himself to be not only a world caliber road racer but maybe the best road racer in the world today—Cal Rayborn.

Steadily, smoothly Rayborn ticked off lap after lap with so little apparent effort that it was difficult to believe that his archaic V-twin was outgunned by the multis. Kawasaki's last real hope faded with the loss of the stinger on one of Paul Smart's expansion chambers, and Calvin continued to circuit the track, never really pressed, until the flag fell.

The "Superbike" was a good program, and a fine Grand National. The head-to-head, make-to-make competition was there despite Kawasaki's troubles. There was no lack of drama. Organization was perfect. The weather was splendid. And Laguna Seca is an exciting venue for both racers and fans. Already, we're looking forward to next year's bash!





## Here's A Machine That Could Easily Gobble Up The Superbikes, Even Today.

# THE CASE OF THE MYSTERIOUS NORVIN

This was the third time I had heard it . . . it started out as a popping crackle, turned into a tappet clicking roar, and then faded into the distance. I've got over twenty years in the bike scene, and I'd be willing to bet that this was a Vincent engine starting up. As I had done before, I dashed out the door and looked up and down the street. There was nothing there! The sound was coming from my street, but darned if I knew from where. There were only two other people in the area with bikes, and I knew that neither had Vincents.

Several weeks went by, and then I heard it again. It was a warm summer evening, and I was washing my street hack on the lawn. I grabbed my helmet, cranked over the bike and blasted up the street just in time to see a 'Norvin' swing out of a driveway up ahead. At the stop sign, I pulled alongside and asked if I could look at his bike. The owner turned out to be Bob Keowen of Lakeview Terrace, California, and the reason I could never locate where the sound was coming from, was it emanated from a closed garage where the bike was stored in Burbank. For those of you who never heard the term 'Norvin' before, it's a combination of the two words, Norton and Vincent. Years ago, after the Vincent Company went out of business, there were still lots of engines available, but no frames to put them in. Many mechanically inclined Englishmen built specials, but the most popular of them were the Norton-Vincent combination. After a while, several firms even went as far as to offer engine mounting plates to make the whole thing a 'bolt in' procedure. This bike turned out to be even more exciting than most, as the Norton was one of the racing featherbeds, complete with the gigantic, handmade alloy racing tank.

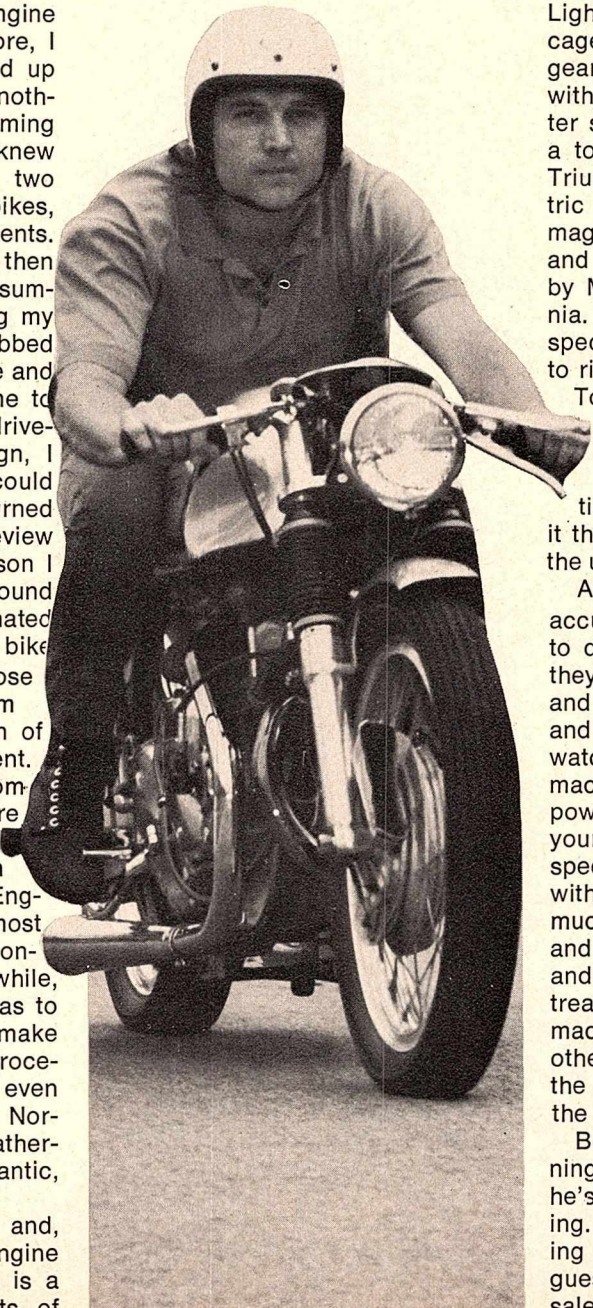
The frame is vintage 1957, and, at one time, held a Norton engine displacing 350cc's. The engine is a 1951 Rapide that has all sorts of

groovy things added to make it go faster. Here's a few of them: Pistons, 11.5 to 1 specialloid with spacer plates to reduce it to 10 to 1; cams, Lightning number 2; two front heads ported to 1 3/8; Lightning large valves; Lightning flywheels; Vabrac rods; caged roller Alpha lower end; the gearbox has doublebacklash gears with alternate dogs removed for faster shifting; high gearbox ratios give a top speed of 138 miles per hour; Triumph clutch; 32mm Amal concentric carburetors; standard Shadow magneto rebuilt by Marty Dickerson; and the non-stock pipes were built by Merf Poynor of Burbank, California. There's lots more in the way of specs, but let me tell you how it feels to ride this monster.

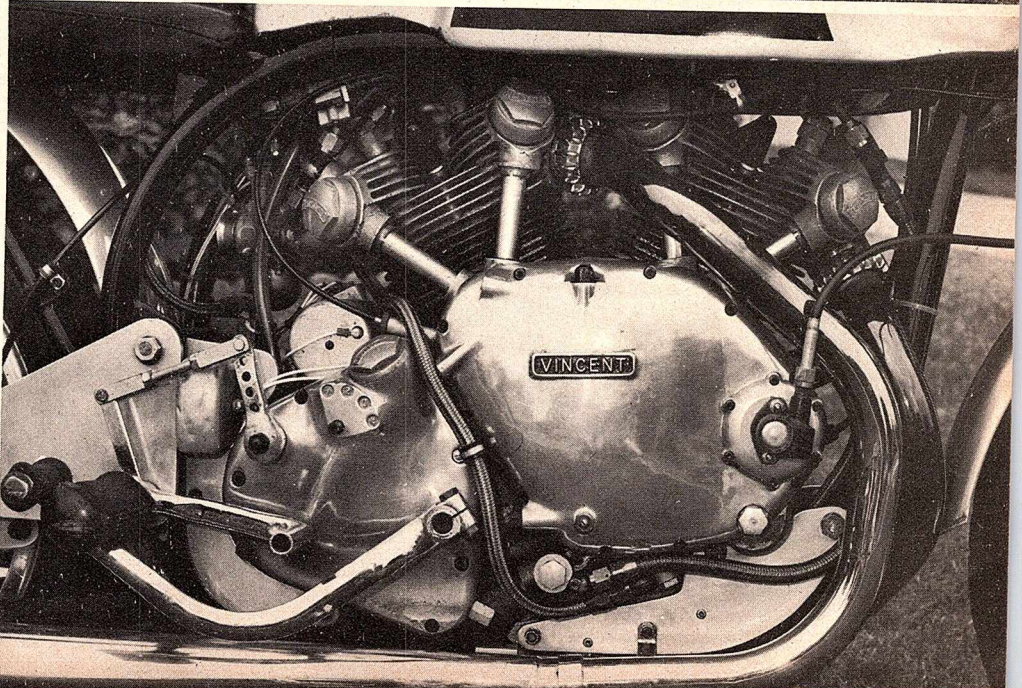
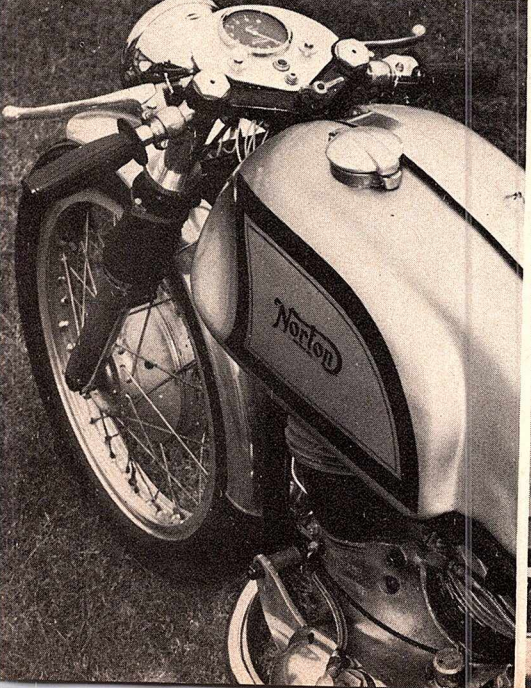
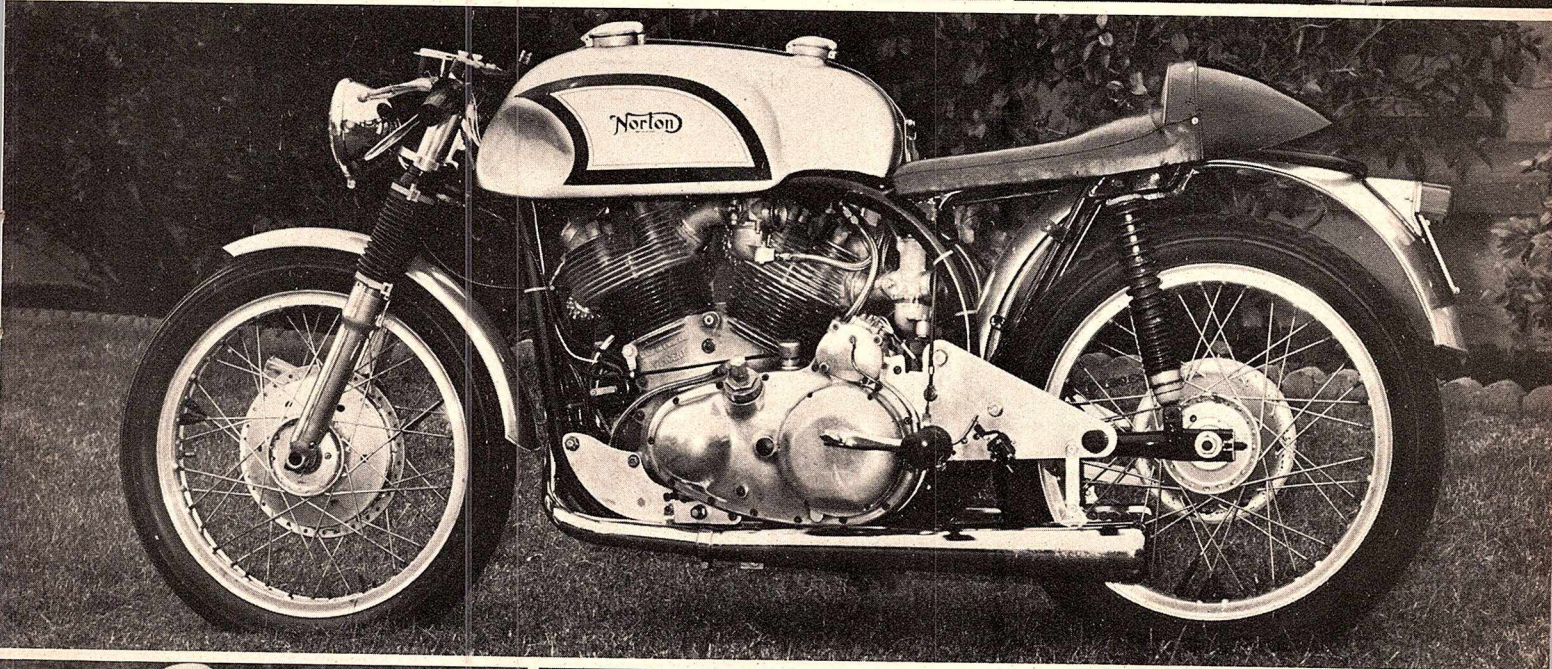
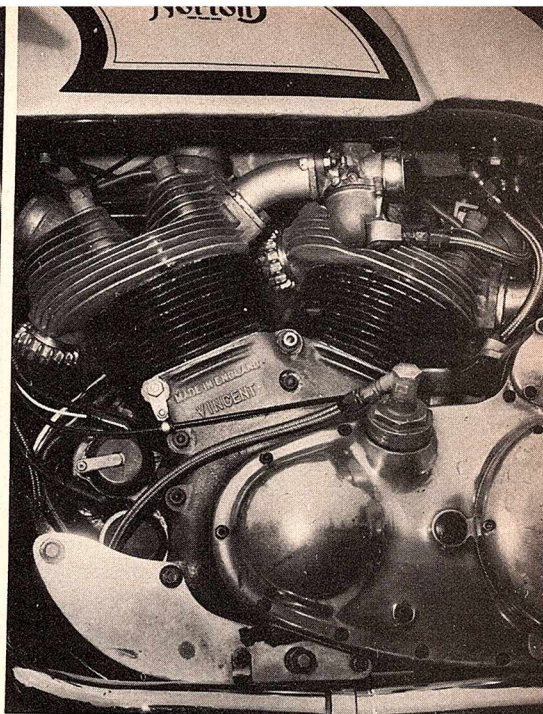
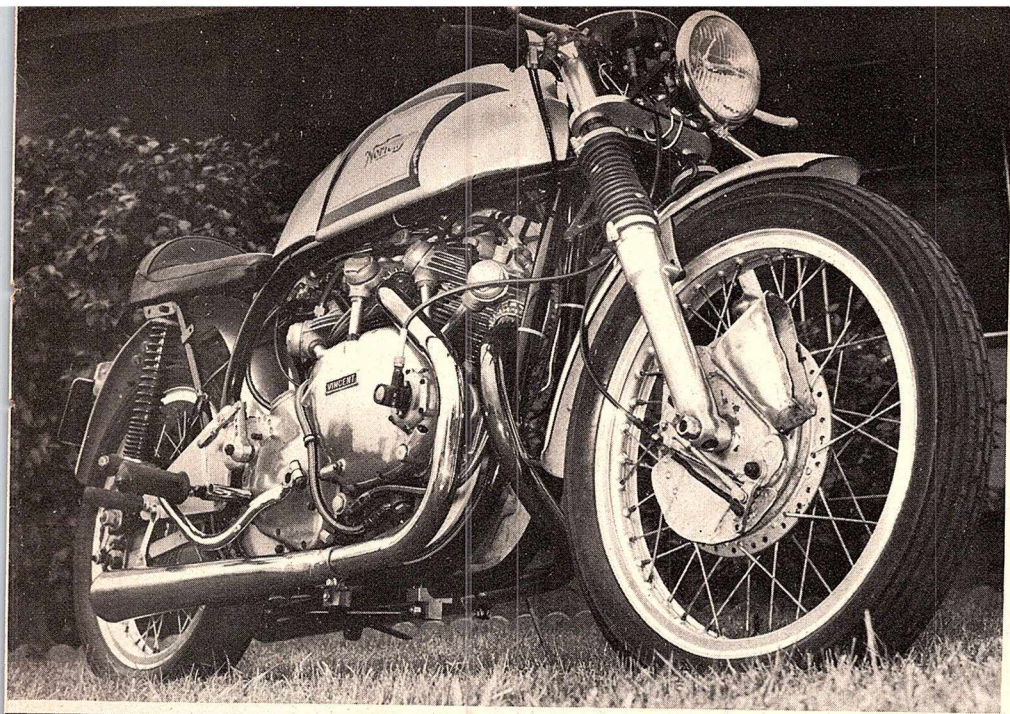
To begin with, it starts on the first kick almost every time. It has lots of compression, so it's actually easier to start by putting it on the centerstand. Once it thunders to life, you begin to notice the unusual position you must assume.

After a few minutes you become accustomed to it, and actually begin to dig it. All the controls are where they fall right into hand (and foot), and braking and shifting is smooth and easy. At speed, you've got to watch the tachometer, as the big machine has such fantastic horsepower, that in just seconds you find yourself going way over the freeway speed limit if you're not careful. Even with the high gearing, if you grab too much of a handful in even second and third, the rear tire will scream and smoke like it's being badly mistreated. I've got a hunch that this machine from another time and another place would gobble up any of the superbikes around, and here's the kicker to the whole story.

Bob, the present owner, is beginning his senior year at UCLA where he's majoring in nuclear engineering. In order to continue his schooling he's in need of some bread. You guessed the rest . . . the bike's for sale. First come, first served! ●









They say competition is good for everybody, especially the consumer. In the world of motorcycles, competition means, "Do in thy fellow motorcycle manufacturer so I can have a bigger hunk of the market." With a life and death struggle of this magnitude only the bravest and most resourceful survive. Engineering staffs are pressed into countless hours of development and creativity while mayhem strikes the sales department because they have to get rid of these new creations.

If it's a machine that grabs the public just right then selling isn't the problem, getting enough of 'em is. It doesn't have to be a good machine to sell, it just has to have that trick piece or whatever that gets 'em sold.

Kawasaki hit it with their 500cc triple a couple of years ago, it was

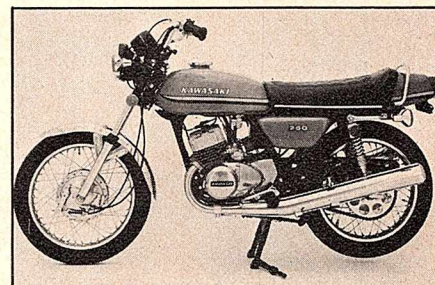
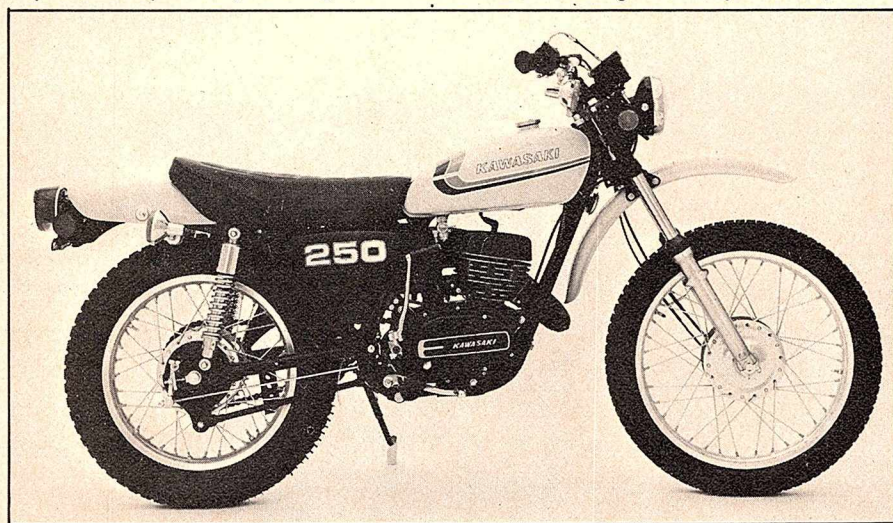
the fastest thing from stoplight to stoplight, and that's always a reason to own one within our status-conscious society. They followed up with a 350 triple and a 750 triple to further enhance their line, that was in 1972.

We previewed Kawasaki's 1973 line-up of motorcycles and saw three basic new motorcycles. They have made engineering and mechanical improvements on the whole line, such as a longer wheelbase for the 500 triple and disc front brakes on their 350 mini-bomb. In general, bold colors and stripes identify the '73 line of Kawasakis, plus there's three new models.

The 250 triple, code named S-1, isn't going to shake up the world the way that old 500 did. Their claim to fame is being the only 250 triple on

the market—big deal. They claim 28 horsepower at 7,500 rpm which is one horse less than the old 250 twin Suzuki introduced in 1965. Somehow I don't think there's a place for 250cc road machines in the vastness of the United States market. Our roads are just too long and too fast, and it cost so little to jump up to the next size and have the added performance that you really need.

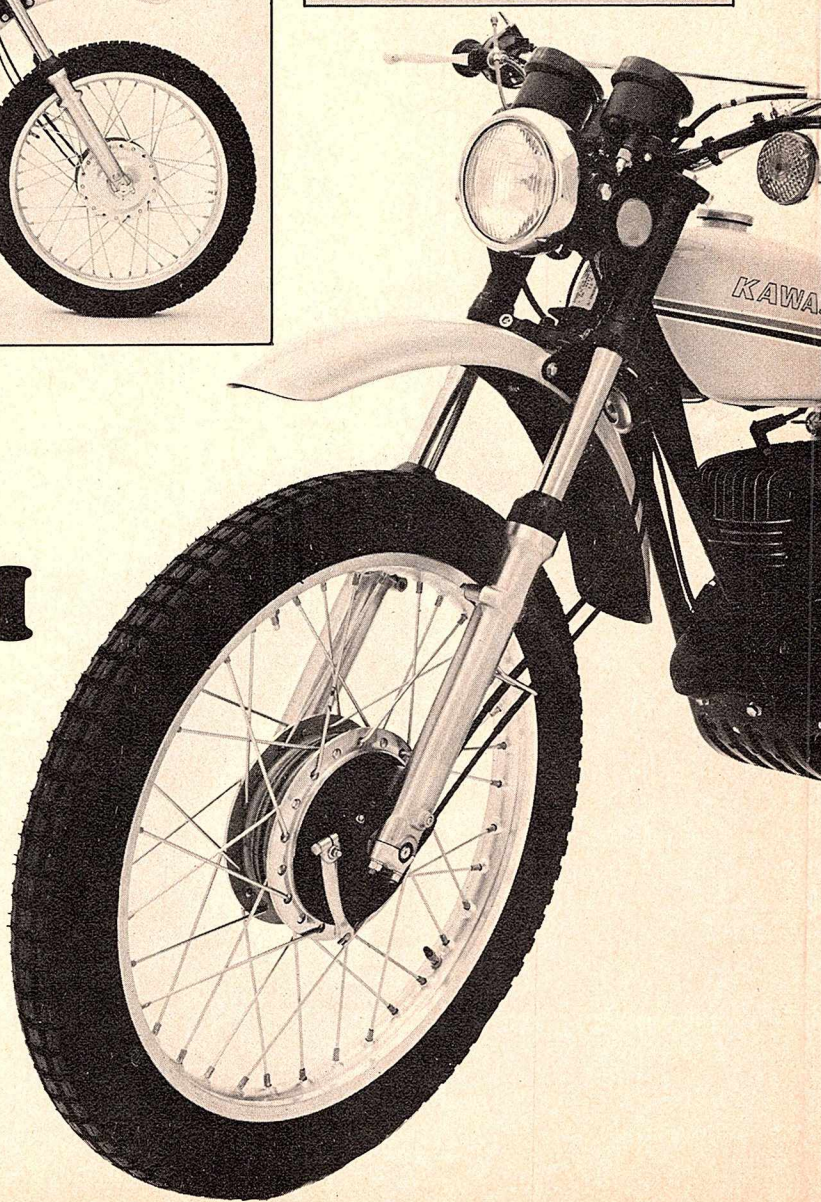
Kawasaki has spent a lot of money touting their rotary valve two-stroke engines. The education program has been extensive and they picked up a great following of rotary valve enthusiasts. The big drawback with the rotary valvers for off-road travel is



# 1973 KAWASAKI PREVIEW

A LOOK AT THE  
WHYS AND WHEREFORES  
OF THE  
KAWASAKI LINE

By Dave Ekins





its excessive width. Rotary engines do pull from the bottom better than piston ports which gives them an advantage in off-road usage. So instead of narrowing their current line of off-road rotary valve two-stroke engines, they have introduced an entirely new model, a piston port 250cc single known as the F-11. I think this one machine marks the beginning of the end for Kawasaki's rotary valvers.

The F-11 looks to be a very good enduro bike. Beginning with a set of non-fill rims just like the Honda XL-250 has, the bike is well finished with all the trick goodies for dual-purpose riding right down to its U.S. Forest

Service approved spark arrestor. Prototypes have been on test here for more than six months so there shouldn't be a flaw in the new 250. With an advertised weight of 264 pounds and a 22 horsepower rating at 6,500 rpm, the F-11 is bumping heads with its three major adversaries.

The Italians have been building transverse four-cylinder motorcycles for many years now. Trouble is they never built enough of them to seriously consider going to market. It took Honda to come out with a 750cc transverse four and sold a batch of 'em before the rest of the world woke up to the fact that maybe people would purchase such an exotic motorcycle—especially the Americans. The Kawasaki Motor Corporation is one giant conglomerate, motorcycles are just a tiny segment of this industrial empire.

So from a company with resources as obvious as theirs, you would expect something excitingly different when they tell you they have just built an all-conquering motorcycle (especially with their 500 triple to look back upon). What they gave us is another transverse four. They followed the lead proven by Honda that people like four-cylinder, four-stroke road machines and backed it up with some Detroit and Harley-Davidson thinking, "Make it bigger than anybody else's."

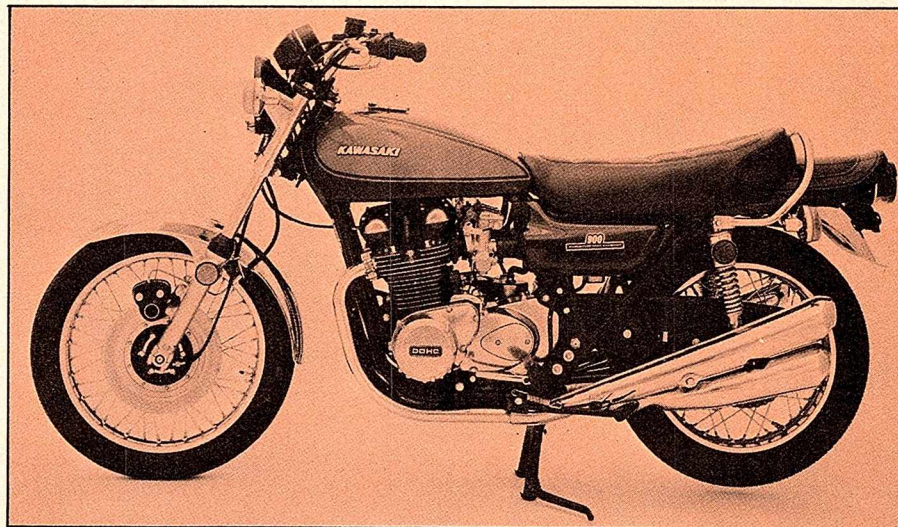
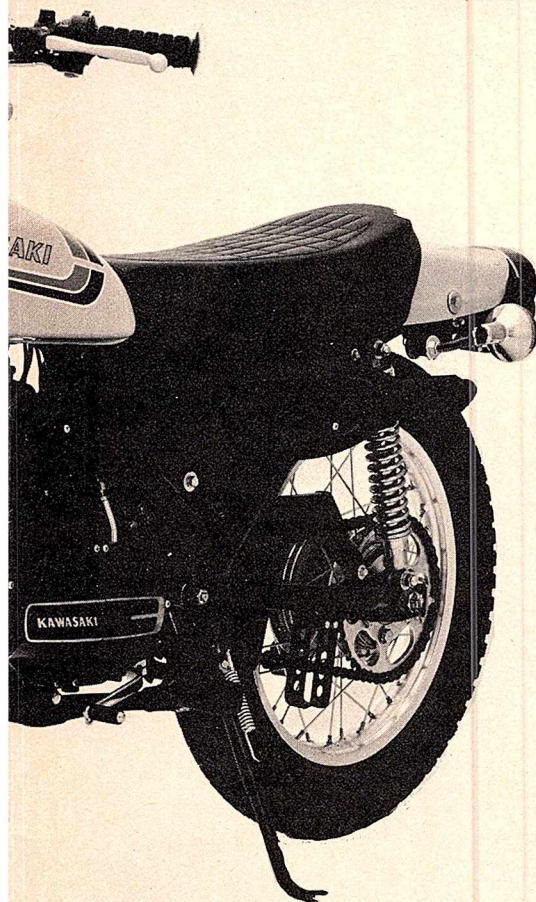
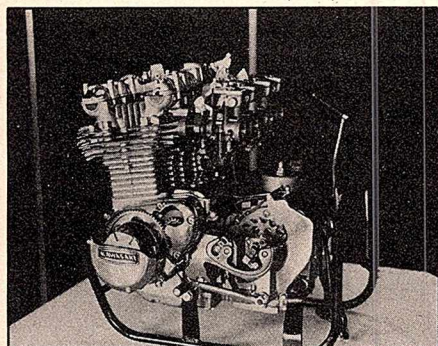
The Z-1 Kawasaki Four road machine is different in that it has 900cc's and two overhead camshafts. (I think Honda will counteract with four valves per cylinder, then Kawasaki will rebound with four valves per cylinder and dual OHC whereas Honda

will also come out with DOHC to compliment their four valves per cylinder. Then we will be where Offenhauser has been for the past 40 years, DOHC and four valves per cylinder.) The Z-1 is an 82 horsepower motorcycle (the most you can buy on a production two-wheeler), and will run 130 miles per hour, they say. It's supposed to weigh 506 pounds, that's got to be a dry weight, and has been in the development stages for nearly four years.

A big problem with these super road burners is chain life, like there is none, practically. The Kawasaki has come out with a big  $\frac{3}{4}$ -inch pitch drive chain ( $\frac{5}{8}$ ths pitch has been considered the upper limit for years), and an automatic chain oiler. The big plus factor for this motorcycle is not its nearly 1000cc capacity engine, but an excellent double cradle frame.

They use a very wide-spaced chassis similar to Norton's featherbed, it even ties into the steering head in the same manner. The bike has the expected rocket feel of a muscle machine, yet it's vibration free and predictable from the throttle. And it's wide, two inches wider than the Honda Four. This is the rub.

I personally expected to see Kawasaki present us with a 1000cc category V-four. This, of course, is more in their keeping by coming out with something startlingly different, and better. The basic advantage of having a V-four is the same reason Harley-Davidson clings to its old V-twin; you can make them narrow that way, and a narrow machine is a desirable one. Well, maybe next year. ●





# A quarter of a million bikes ago, the basic Bonneville engine started winning races. It still is.

When our first famous vertical twin began winning, Gene Romero hadn't even been born. Yet last year Gene wore the AMA's Number 1 plate because that same basic engine—Triumph's dual-carb, 4-stroke OHV Bonneville—helped him thunder to his Grand National Championship.

To hang so tough for so long, an engine just has to be better-designed and better-built. It even looks the way a great engine should.

And it's pulling a great bike. Bonneville offers a choice of four- or five-speed gear box, for greater flexibility. It has a special Through-The-Frame Oil System that obsoletes the oil tank. And a beefed-up pump that flows oil faster to cool cooler.

It has aluminum alloy forks—stronger yet lightweight, and they damp 6 $\frac{3}{4}$ " both ways. Conical alloy hubs brake surer and cooler while they cut unsprung weight. And the double-loop frame is hand-welded for double strength.

There's plenty more. But maybe you want a big bike with the simplicity of a single carb. Then straddle a Triumph Tiger 650. It has the super specs of the Bonneville, but its one Amal 30mm concentric makes touring easier on the coins.

Find out what 650cc's are all about: Triumph Bonneville or Tiger. With the engine that won a reputation as a classic. It's still winning it.

**Triumph's Tiger 650** has many of the same specs as the Bonneville. However, Tiger's max. torque is 36.5 ft. lbs. @ 6250 rpm; it has one Amal 30mm concentric carburetor; and it weighs 386 pounds.

**ENGINE TYPE** OHV—4 stroke  
**CYLINDERS** 2  
**MAX. TORQUE** 38.5 ft. lbs. @ 6000 rpm  
**BORE/STROKE** 71 x 82mm  
**COMP. RATIO** 9:1  
**TRANSMISSION** 4-Speed gearbox  
5-Speed gearbox  
**CARBURETOR** 2-Amal 30mm conc.  
**FRONT TIRE** Dunlop 3.25 x 19" K70  
**REAR TIRE** Dunlop 4.00 x 18" K70  
**FRONT BRAKE** 8" DLS  
**REAR BRAKE** 7" SLS  
**WHEEL BASE** 56"  
**GND. CLEAR.** 7"  
**DRY WEIGHT** 387 lbs.  
**FUEL TANK** 2 $\frac{1}{2}$  & 3 $\frac{1}{2}$  gals.  
**OIL** 6 pts.

A photograph of a person wearing a white helmet and a dark jacket, riding a Triumph Bonneville motorcycle. The motorcycle is orange and white, with 'Triumph' written on the fuel tank. The rider is leaning forward, and the background is blurred, suggesting motion. The motorcycle has a large headlight, orange turn signals, and a black front fender. The rear wheel is visible, showing a black tire and a chrome hub.

The Hot One  
**TRIUMPH**



Price and specifications subject to change.

TRIUMPH MOTORCYCLE CORPORATION A DIVISION OF THE BIRMINGHAM SMALL ARMS COMPANY, INC. WEST P.O. BOX 275 DUARTE, CALIF. 91010. EAST P.O. BOX 6790 BALTIMORE, MD. 21204

Printed in U.S.A.



# MODERN CYCLE READER SERVICE GUIDE

The *Modern Cycle* Reader Service Guide makes it easy for you to acquire catalogs, brochures, or fact sheets on motorcycles or accessories. If you've had trouble in the past finding out where to write for the information you need, the Reader Service Guide is the answer to your problem. Now, all you have to do is mail a letter to *Modern Cycle*, and we'll do the rest. The only restrictions are: The name of the company *must* appear in the listing below, and you can send in only *one letter or postcard for each catalog*. We don't care if you send for ten different catalogs, as long as a *separate letter is sent for each one*. The only catalogs that are not free, are those that have a price marked after them in the listing. Mail your request for a catalog (or catalogs) to: **MODERN CYCLE READER SERVICE**

(Name of Dealer or Distributor) 7950 Deering Avenue Canoga Park, California 91304



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ABC Custom Leathers .....	N/C
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Hyland M.V. (Parts) .....	N/C
Kett Manufacturing Co., Ltd. ....	N/C
Langlitz Leathers .....	N/C
Racing Safety Equipment, Inc. ....	.50
Butler & Smith .....	N/C

## HELMETS

Buco Products .....	N/C
Bell-Toptex Inc. ....	N/C

## CARBURETORS

Anderson-Kittelson Distributing Co. ....	N/C
Anaheim Motorcycle Center, Inc. ....	N/C
Cosmopolitan Motors, Inc. ....	N/C
Racing Safety Equipment, Inc. ....	.50
Steen's, Inc. ....	\$1.00

## FAIRINGS & SHIELDS

Elko Manufacturing .....	N/C
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## ELECTRICAL EQUIPMENT

Anaheim Motorcycle Center, Inc. ....	N/C
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## INSTRUMENTS

Rite Autotronics Corporation .....	N/C
VDO Instruments .....	N/C
Westberg Manufacturing Company .....	N/C

## OILS & ADDITIVES

Air-O Corporation .....	N/C
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Sta-Lube, Inc. ....	N/C
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B-N Supply .....	N/C
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Cosmopolitan Motors, Inc. ....	N/C
Ed Kretz & Son, Inc. ....	N/C
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## TOOLS

Pabatco .....	N/C
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## SEATS & SADDLE BAGS

Triple A Accessories .....	N/C
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## MOTORCYCLE DISTRIBUTORS

American Honda .....	Honda
American Kawasaki Motorcycle Corp. ....	Kawasaki
Butler & Smith .....	BMW
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Cosmopolitan Motors, Inc. ....	Benelli, Parilla
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## TESTING EQUIPMENT

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Filtron Products .....	N/C
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Triple A Accessories .....	N/C
Florida Cycle Face Shields .....	\$1.00
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## MODELS

Pyro Plastics Corporation .....	N/C
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## PARTS CATALOGS

Triangle Motorcycle Service .....	\$1.00
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## CUSTOM PAINTS

Hap Jones Distributing Company .....	\$1.00
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## RACKS & TRAILERS

Air-O Corporation .....	N/C
EPCO .....	N/C

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Hyland M.V. ....	N/C

## SHOP EQUIPMENT

Great State International .....	N/C
Four Way Welder Company .....	N/C







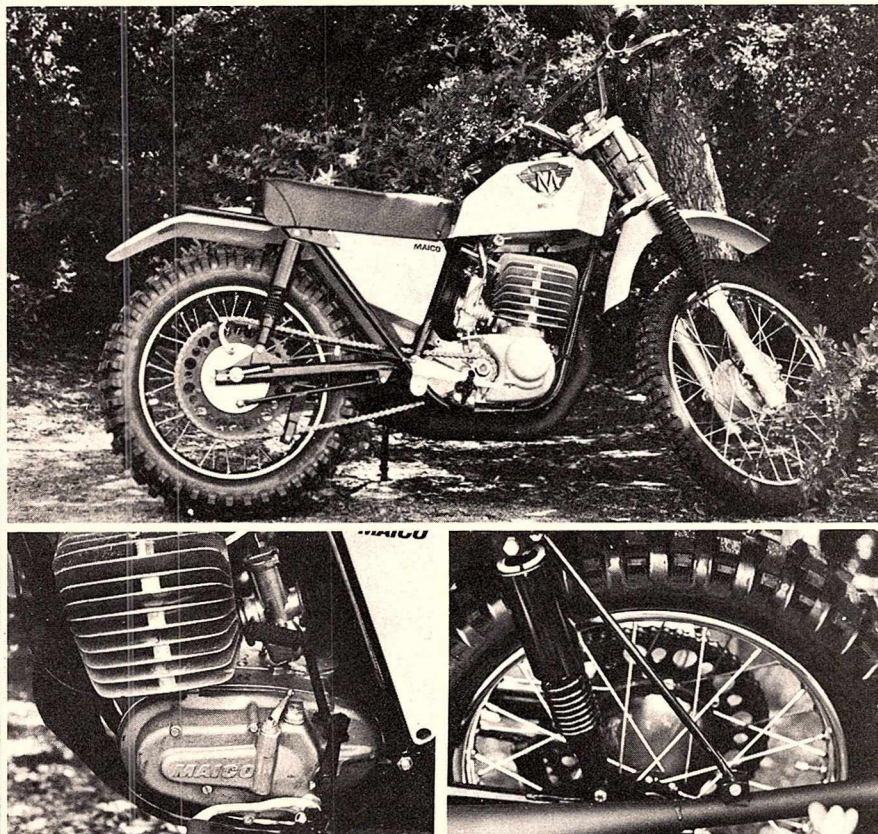
# TEST:

Without a doubt, motocross is the fastest growing segment of our sport. Crowds of spectators gather at these races by increasing numbers to witness the skill and excitement of good competitive racing.

This form of entertainment originated in Europe before the Second World War and came into its own during the early fifties. If a given European event drew less than ten thousand paying customers it was a

mands a versatility not found with its larger counterparts. Because they are not confronted with the expensive and complex tooling to mass produce numerous machines, they can change something whenever necessity dictates. Maico is proud of its hand crafted heritage and doesn't hesitate telling us so in their brochures.

They also like to claim that they offer for sale the same machines



flop. Here in the U.S. our big races are just beginning to draw that many.

Because of its status in Europe, three manufacturers from as many different European countries specialize in building large displacement motocross motorcycles; CZed (the largest), Husqvarna of Sweden, and Maico. The Maico firm is located in a small town in Western Germany and produces a very modest number of machines.

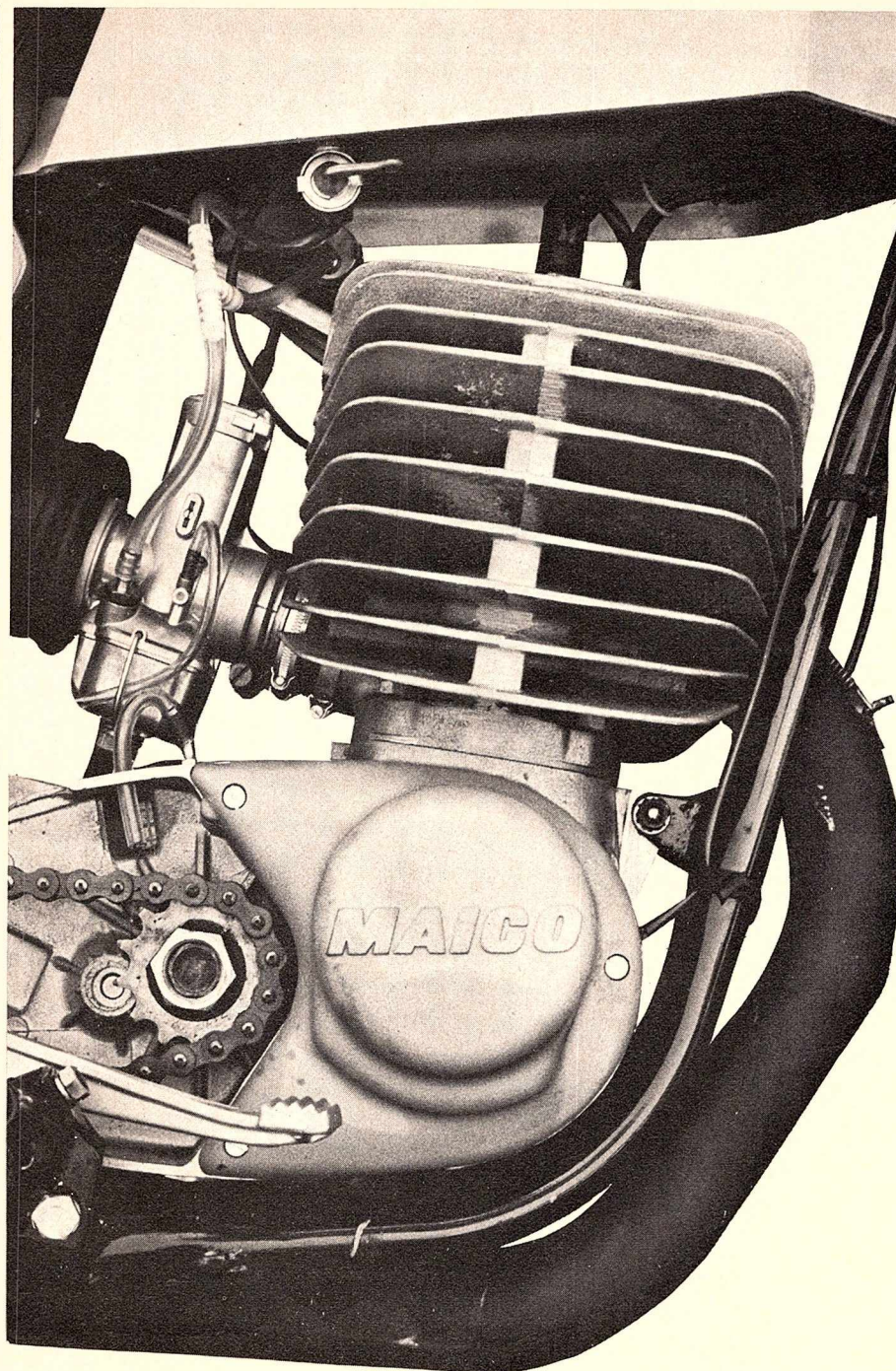
A small factory like Maico com-

used in their extensive motocross racing program. They have three top flite riders, two Germans and a Swede, under contract to chase down the World Grand Prix Motocross Championships. The Swede, Ake Jonsson, has performed well enough to finish second to Roger DeCoster last year, and it looks like a repeat performance behind the flying Suzuki this year. Suzuki, of course, has a little heavier budget, and they don't offer for sale any-

## MAICO'S WILD 400 RADIAL

A FUNCTIONAL HAND BUILT RACER THAT HAULS!





thing like the machine Roger rides. (They admit it, too.) The works Maicos aren't quite the same either, but they're a whole lot closer to the real thing than what comes from across the Pacific.

Main emphasis on the works bikes from Maico has been in the weight saving category. Costly and exotic materials are found on the special racers which are not, and understandably so, found with the over-the-counter models. But those very important things are there like chassis dimensions and geometry, cylinder porting, and suspension units.

Like the other two motocross specialists, Maico manufactures their own forks. It is readily identified with the front axle unconventionally fixed

to the front of the long alloy lower leg that extends well below the axle itself. Held by alloy triple clamps that keep the fork tubes very close to the steering head in profile, proper trail of the front wheel is obtained by mounting the axle ahead of the slider. Very long springs are used in conjunction with an excellent two way dampening mechanism within the fork tubes. Maico forks have high resistance to twisting and boast of seven inches of controlled travel. They do work well.

The frame is a welded up steel tubular affair that is the result of about twenty years of development. An "H" section swing arm is used that is very rigid. The rear wheel is sprung by Girling dampers swap-

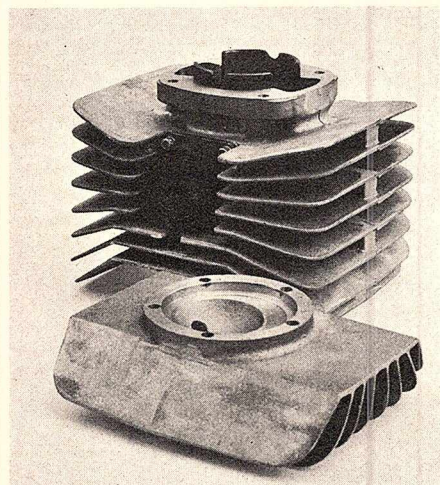
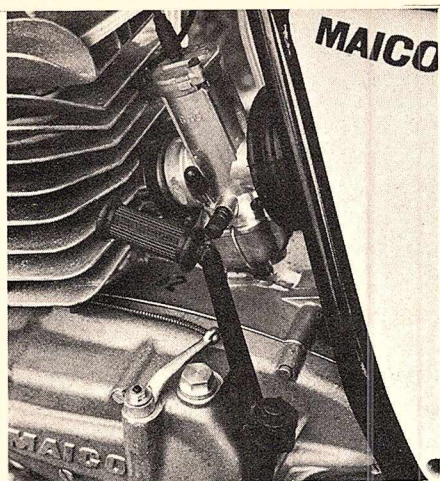
ped with 60/90-pound progressive springs. The engine, even though it's a tallish 400, is not carried as low as the CZ, but higher for additional traction when under power.

Rather than admit it's ugly they like to tout Maico's toutonic design. Whatever, radiused and rounded fenders don't exactly match up to a gas tank with eleven flat sides. All these plus the air filter box are made from hand laid fiberglass with the lemon-yellow color of the 400 impregnated.

Just a plain ol' black seat fills the void between the tank and rear fender, but it's got the right shape and proper amount of padding for a motocrosser. Handlebars are strictly of the motocross variety and mount solid to the upper triple clamp midway between the stanchion tubes and T-stem. Folding footrests are bolted directly to the chassis in two places, and the entire seat-handlebar-footrest relationships are proper for both standing or sitting.

The engine is a true cobby-looking monster of bumps and bulges finished in rough sand castings. The huge head and cylinder are formed in a radial shape, hence, the name. By doing this they pick up a couple more fins at the top of the cylinder for additional cooling. The head actually has less cooling area than the con-





ventional ones, yet it's enough to do the job.

Through the years Maico has been very stubborn about sticking to their long stroke engines. Even with the influx of ultra-short strokers from Spain that produce all kinds of horsepower, Maico has been giving them a nose to nose battle on the race tracks with their long stroking torquers. While actually getting good power as low as 3,500 rpm and increasing it up through 7,000, it has good solid throttle control darn near to idle speeds.

They go about developing their power in a strange way. Ports within the cylinder are huge, so large, in fact, that the inlet and exhaust holes are bridged to keep the piston rings from popping out. Port timing, the degrees relative to when the piston opens and closes these holes, is near road race specifications. With this type of radical timing one would assume the engine would not have any low speed power, but it does.

The cylinder is five-ported, similar to what Yamaha made famous. Both rear transfers open one degree ahead of the main transfers and blow into an off-set squish chamber in the cylinder head. The half moon, or off-set combustion chambers, are designed to keep the combustion flame

front off the exhaust side of the cylinder in an effort to keep this habitual hot spot as cool as possible.

Height of the exhaust port is very critical in two-stroke tuning. The 400 opens at 85 degrees After Top Dead Center which means it closes at 85 degrees before; that means the duration of it being open is 190 degrees or more than half of a revolution. Yet they get tons of torque.

The 400 contains its early escaping exhaust gases at low speeds with an expansion chamber system whose mysteries are known only to them. All we know is that the machine, with its smallish 36mm Bing carburetor and very slick under-the-cradle expansion chamber, does work extremely well.

Fitted with a behind the cylinder compression release the chore of kickstarting the beast is made easy. Tickle the Bing until fuel flows out, wait three seconds, and it starts up on the third kick every time. After the bike was warmed up our test 400 always started on the first try. Fitted with a primary kickstarter, finding neutral isn't necessary if you goof and want to restart it in gear in a hurry. Just hold the clutch in and go at it.

The configuration of Maico's unique clutches haven't changed ap-

preciably over the last two decades. Spring tension is applied by a set of dished spring steel washers that are stacked between the clutch plates and clutch hub. Its releasing mechanism is by a cam and throw-out bearing located within the left hand outer case cover. They've added more clutch plates and lengthened the size of the assembly in order to cope with increases in horsepower and displacement over the years. The clutch is a little heavy to pull, but it does do the job of transmitting power from the engine to the gears.

These large Maico singles have only four-speed gearboxes. They're offered in either wide ratio or close ratio depending on the machine's intended use. Our 400 test bike was set up with the close set of motocross, and we found each selection to be in its proper ratio to the next. The bike comes with an overall 13-tooth countershaft sprocket and 55 on the rear wheel, that's about a 4.23 to 1 final ratio. Chargers like Tim Hart gear their Maicos 14/56, which is 4 to 1 producing a better top end.

Both engine and gearbox are running in either ball or needle bearings with the right side engine bearing getting lubricated from the gearbox oil. Engine seals are on the inside of the main bearings producing a



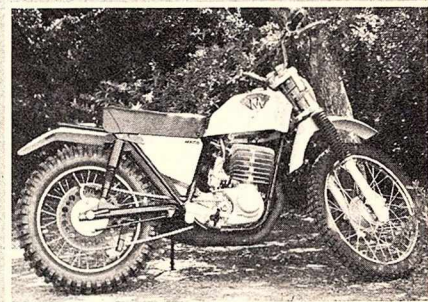


little more squeeze in the secondary compression area. The clutch side main bearing is primary lubricated.

Two shifting forks locate in a cam plate and slide the gears into engagement on splined shafts. The shift lever does not have a solid feel, it's more like a spring. The engine produces a very long power curve, and you actually control the rear wheel with the throttle. The front tire sticks quite well in the berms allowing the bike to charge off quickly.

Maico's fine fork and rear suspension combination smooth out bumps without much fuss and lofts the bike into a controllable trajectory when they become deep whoop-de-dos. The chassis gives no reason to swap ends, nor is it a wheelie freak. It is a well balanced package for winning motocross races.

Some of us were not too happy with the handlebars, we felt they were a bit wide. The side stand looks as if it's a feeler from a preying mantis, and none of us are particularly overjoyed with those deep valanced Akront rims. It seems they fill with mud, and mud adds weight to the unsprung components adversely affecting the machine's handling. As a total racer it ranks right up there with Husqvarna and CZ, a single purpose machine designed to do one job exceptionally well. ●





# MAKE MAICO

## MODEL 400 RADIAL

### PRICE AS TESTED \$1,375.00 Approx.

### MAXIMUM SPEED AS GEARED 72 mph

### WEIGHT 226 lbs. DRY: Fuel Tank Empty

## ENGINE

Engine Type ..... SINGLE CYLINDER, 2-STROKE  
 Bore ..... 77mm  
 Stroke ..... 83mm  
 Displacement ..... 386cc  
 Compression Ratio ..... 11:1  
 B.H.P. at R.P.M. .... 41.8 AT 7,000  
 Carburetor ..... 36mm BING CENTER FLOAT  
 Ignition ..... ROTATING MAGNET MAGNETO  
 Starting System ..... PRIMARY KICK  
 Lubricating System ..... OIL MIST

## FUEL AND OIL

Oil Capacity ..... IN FUEL  
 Oil Recommended ..... CASTROL GP 50W  
 Fuel Capacity ..... 2 GALLONS  
 Fuel Recommended ..... PREMIUM  
 Approximate mpg ..... 35

## FILTERING SYSTEMS

Air ..... PAPER  
 Oil ..... SCREEN  
 Fuel ..... SCREEN

## FRAME

Frame Type ..... DUPLEX CRADLE  
 Weight Distribution ... FRONT: 48%, REAR: 52%  
 Wheelbase ..... 56 INCHES  
 Ground Clearance ..... 7.5 INCHES  
 Peg Height ..... 13 INCHES  
 Seat Height ..... 33 INCHES  
 Handlebar Width ..... 33.5 INCHES

## SUSPENSION-TYPE

Front ..... TELESCOPIC FORK  
 Rear ..... SWING ARM

## SUSPENSION-TRAVEL

Front ..... MAICO 7 INCHES  
 Rear ..... GIRLING 3.75 INCHES  
 Distributor ..... COOPER MOTORS

## DRIVE TRAIN

Clutch Type ..... MULTI-DISC, WET  
 Primary Drive ..... TRIPLE ROW CHAIN (1.86:1)  
 Countershaft Sprocket ..... 13 TEETH  
 Final Sprocket ..... 55 TEETH  
 Final Drive ..... SINGLE ROW CHAIN (4.54:1)  
 Gear Ratios ..... Internal Overall  
 1st ..... 1.99:1 ..... 12.72:1  
 2nd ..... 1.52:1 ..... 9.73:1  
 3rd ..... 1.23:1 ..... 7.77:1  
 4th ..... 1.00:1 ..... 6.40:1

## TIRES AND WHEELS

Front ..... 3.00x21 METZLER KNOBBY  
 Rear ..... 4.50x18 METZLER KNOBBY

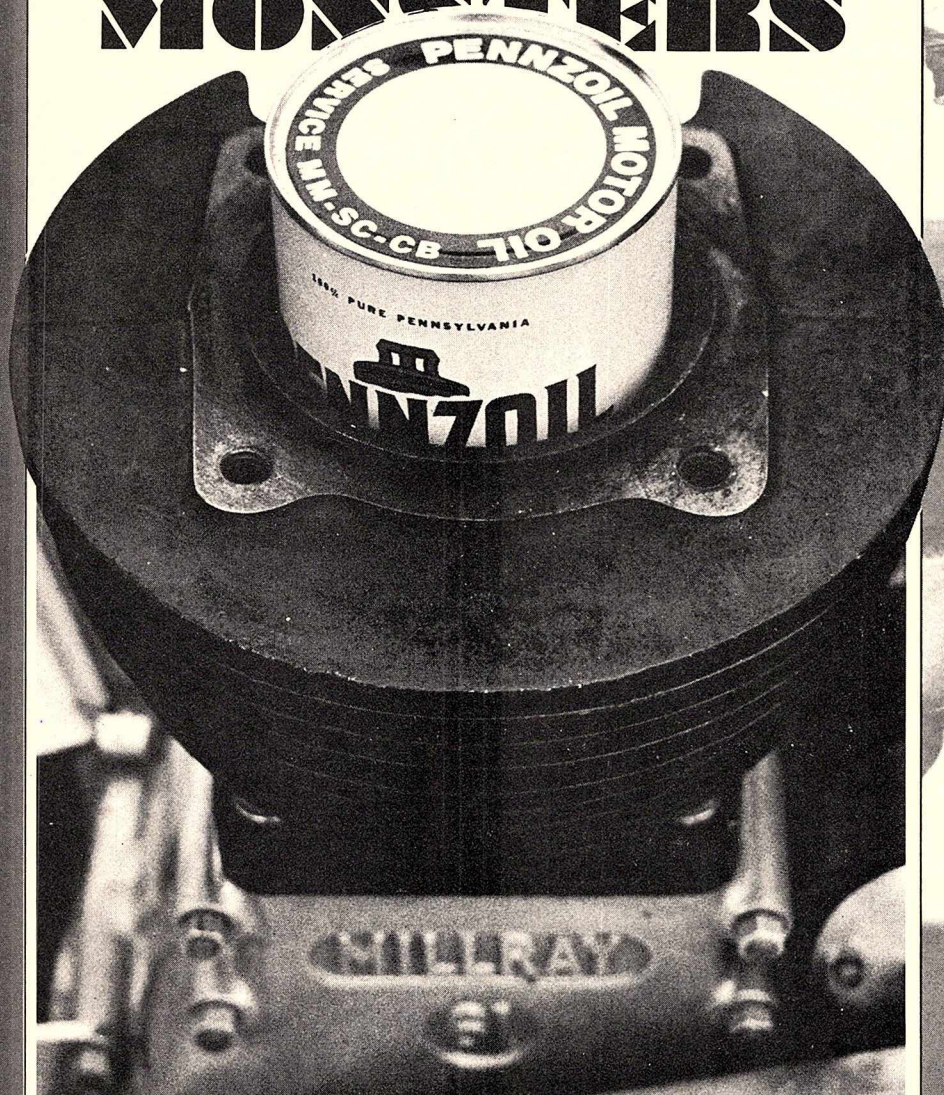
## IMPRESSIONS

	Poor	Good	Excellent
Throttle Response			●
Acceleration			●
Power Band			●
Starting		●	
Engine Noise		●	
Muffling		89Db(A)	
Vibration		●	
Handling			●
Choice of Tires			●
Suspension			●
Rider Comfort			●
Transmission		●	
Instrumentation	Does Not Apply		
Lighting	Does Not Apply		
Toolkit	Does Not Apply		
Paint and Chrome		●	
Styling		●	
Mileage		●	
Braking		●	

2815 West Olive Avenue ..... Burbank, Ca, 91505



# MILLRAY'S MARVELOUS MECHANICAL MONSTERS



A photograph tells  
a thousand words. That's  
a full-sized quart  
oil can sitting  
on top of the piston.

## A CLOSE LOOK AT BACKYARD YANKEE INGENUITY

Story and photos  
by Lawrence Eldridge

Bob and Harry Millray have been making things that work for longer than either care to remember. Fortunately for us, they have a liking for motorcycles and somewhere along the line decided to build a couple to meet their personal tastes.

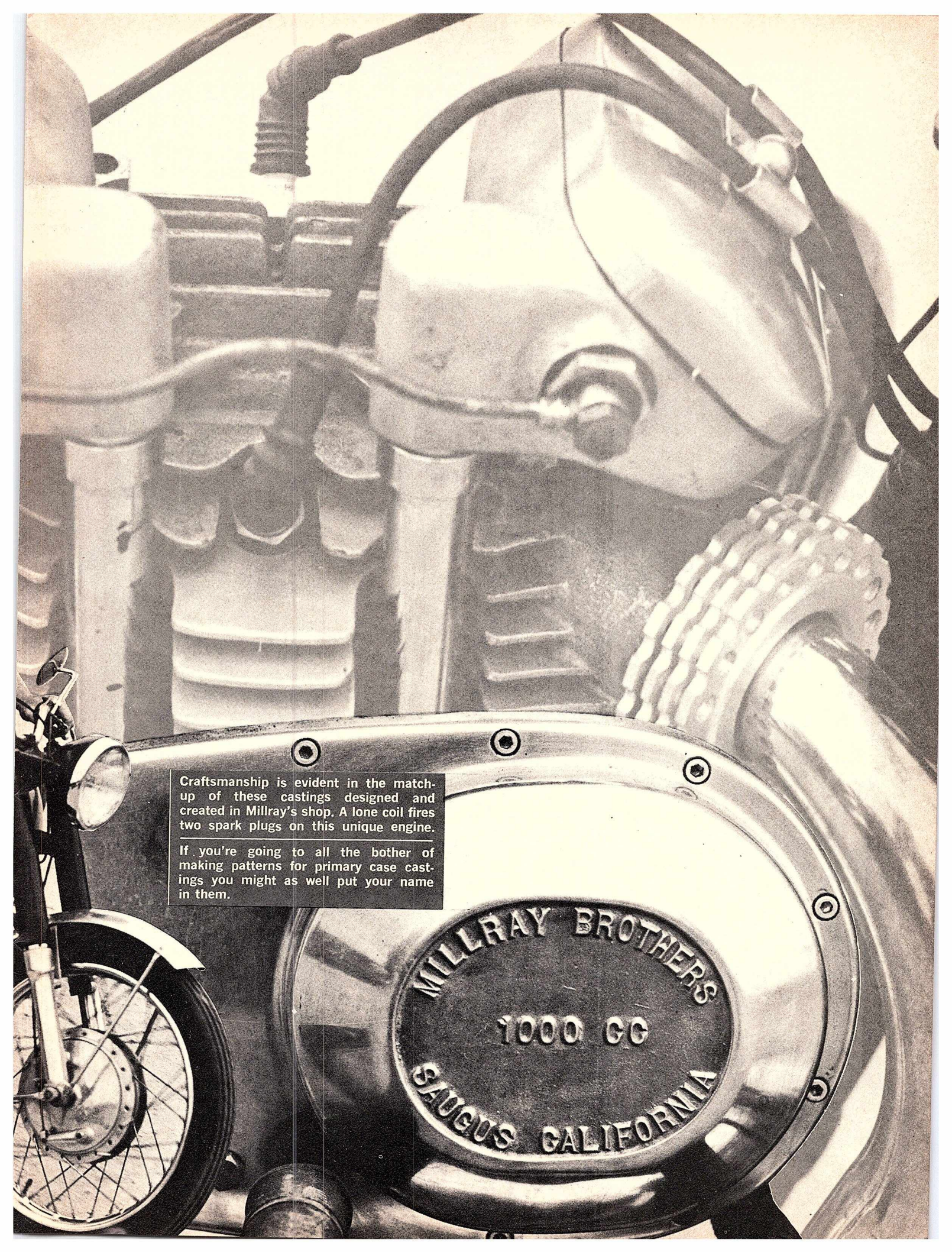
Bob lives in a modest home situated in a desert canyon about 20 miles from Los Angeles and the multitude of people. Near the house is his machine shop, and judging from the outside you'd dismiss the structure as nothing more than a storage shed.

Once inside, and if you have any knowledge of machinery and mechanics, your jaw drops at the sight of Bridgeport mills, lathes of different sizes, and a complete foundry. The Millrays have a thorough knowledge of putting all this equipment to work,



Millray demonstrating  
low speed stability  
of his latest creation,  
the 1200cc V-four.





Craftsmanship is evident in the match-up of these castings designed and created in Millray's shop. A lone coil fires two spark plugs on this unique engine.

If you're going to all the bother of making patterns for primary case castings you might as well put your name in them.



and their two fully operational motorcycles are living proof.

Several years ago, Bob Millray decided he wanted a 1000cc single cylinder motorcycle. There were none for sale, so he did the next logical thing and made his own. It's a clever motorcycle, well thought out and expertly done.

Basically, the 61-incher has a square bore and stroke of  $4\frac{1}{4}$  inches. It is of the dry sump-type with a one gear-type oil pump applying oil to its moving parts, and the other is used to return oil back to the tank. A push rod operated single with a maximum operating range from about 800 rpm to 5,000, she thumps along taking giant strides and covering yards at a time.

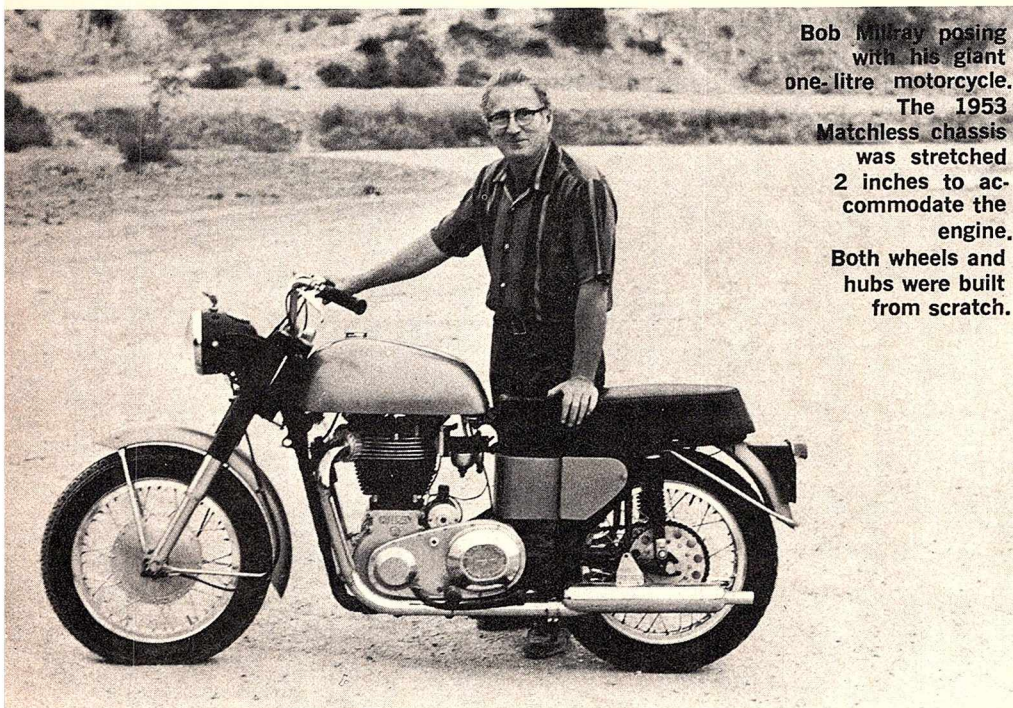
The giant lunger is 25 inches tall, and when placed in the modified AJ5 chassis, it's 38 inches from the top of the gas tank to the ground. Besides the Matchless frame, an AJ5 gearbox is used and Norton forks. Harry Millray cast and then machined both wheel hubs and backing plates. The rear wheel is complete with a drive cushion. Ignition is battery and coil with an early three brush generator replenishing the battery.

For carburetion they prefer to use the American L & L concentric float model with fully adjustable fuel jets. The venturi size on the big lunger is a modest 1-inch. Bob tells me it's a pleasure to listen to it gulp in great quantities of air with each swallow as it pulsates down the highway.

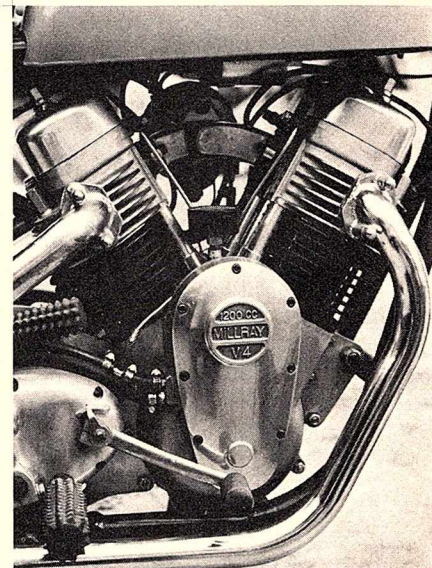
What do you do for an encore? Why build something more exotic. With all this knowledge gained by making the one-litre engine in its entirety, castings, piston, cams, and crankshaft, their next step was the V-four.

Why a V-four? Well that's the best darn way to have a large displacement four-cylinder engine and still keep it reasonably narrow. Millray's four is a long stroke engine, 2.8-inch bore by 3.0-inch stroke, and entirely uncomplicated. It can be completely disassembled with a bunch of hand tools.

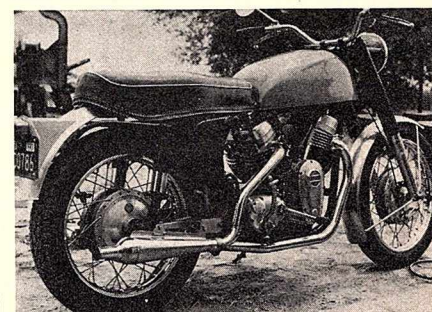
Mounted in a Norton International road chassis, the Millray 1200 is very pleasing to ride. It pulls off idle like a tractor and cruises at highway speeds with very little throttle opening. It has



Bob Millray posing with his giant one-litre motorcycle. The 1953 Matchless chassis was stretched 2 inches to accommodate the engine. Both wheels and hubs were built from scratch.



Literally a pair of V-twins side by side, this Millray creation is thoroughly enjoyable to motor down the highway.



The V-four looks completely at home in its Norton running gear. Imagine the mumbling in Japan if Norton offered this machine for sale.

little or no vibration and sounds like two Harley-Davidson KRs side by side, which it nearly is.

The V-four has a two throw crank with front and rear cylinders offset the width of a connecting rod. Again fitted with a tiny L & L carburetor, the Millray 1200 runs just as smooth as any large multi on the road today. Who said we can't build motorcycles in this country?

# TARABUSI

Racing Pistons Complete with Dyke Rings, Pin, and Circlips. Comes in Standard and Four Oversizes. Each oversize increases 0.5mm instead of 0.25mm. Tarabusi Pistons Available in Six Oversizes.

MODEL	S.L.P.
125cc Bultaco Sherpa	\$16.00
200cc Bultaco Sherpa	16.80
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250cc Bultaco Matador	17.80
250cc Bultaco Pursang 5 Port	18.80
360cc Bultaco Bandido	21.00
125cc Montesa	16.00
250cc Montesa Capra	18.00
250cc Montesa 5 Port	18.80
360cc Montesa Capra	21.00
125cc Maico Enduro-Scrambler	16.00
250cc Maico T-5-5 Port	23.00
360cc Maico Enduro-Scrambler	28.00
400cc Maico Enduro-Scrambler	28.00
250cc Husqvarna	22.00
360cc Husqvarna	28.00
405cc Husqvarna	32.00

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# Public lands belong to all of

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Protect your right to ride by proving that good cyclists make good citizens.

Your Motorcycle Industry Council is working hard to preserve the cyclist's fair share of U.S. public lands.

But excessive noise, or abuse of terrain, can still cost us a lot of ground.

Remember, these lands *are* your lands. Use, don't abuse, your right to ride.

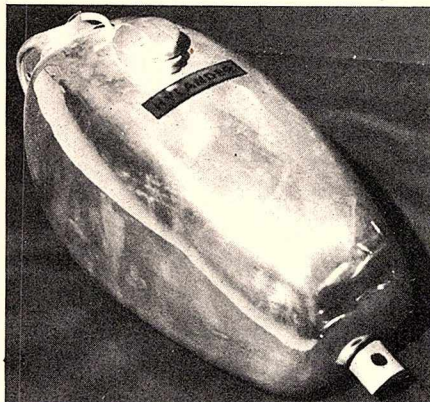


**MOTORCYCLE  
INDUSTRY  
COUNCIL**



# HOT SET-UP FOR BIKE'N BOD

(Text continued from page 47)

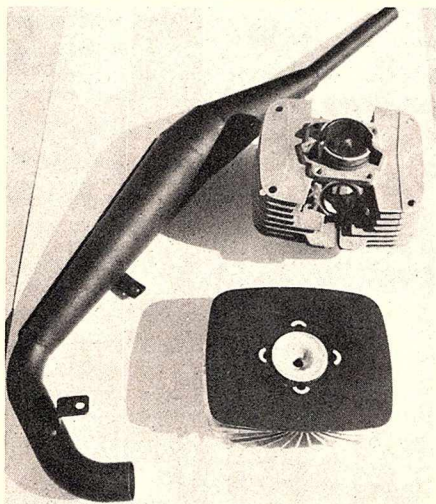


## ALLOY TANKS

They're here at last! The ultra lightweight, European made, "Hylander" alloy gas tanks for Husqvarna Motocross, Desert and Enduro machines. Three types are available: The 1.8 gallon capacity at \$75.00, the 2.4 gallon at \$77.00, and the 3.0 gallon at \$79.00.

All tanks are equipped with Monza-type quick filler cap, separate breather, balance pipe between lobes, gas tap and gas line fitting at no additional charge.

The tanks are manufactured from 16 gauge, N.S. 4 heavyduty, lightweight aluminum alloy, using the most modern welding and manufacturing techniques. Each tank is pressure tested, individually inspected and ready to bolt onto your Husky. Weight is only one-half that of standard tank. Order yours today from Lynn Wilson Motorcycle Specialties, Box 653, Dept. MC, Chatsworth, California 91311. California residents please add 5% sales tax.

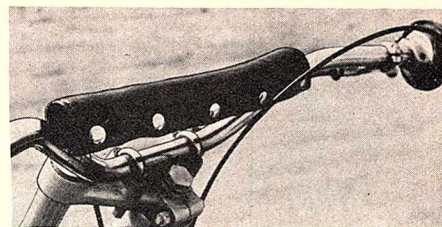


## PUCH KITS

Cycle Products West is a competition shop and specializes in Puch motorcycles. Being specialists, they have developed a very successful Competition Kit for the 125cc Puch.

The kit consists of a custom engineered down pipe, ported cylinder, and machined head. (This conversion uses your stock head and barrel.) The kit may be purchased in its entirety for \$99.95, or you may have the services done in stages. The pipe retails for \$44.95, the ported barrel is \$50.00, and machined head is \$22.95.

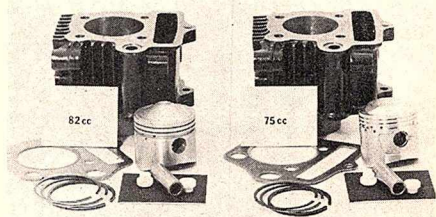
To place your order, contact, Cycle Products West, 11900 West Pico Blvd., Dept. MC, West Los Angeles, California 90064.



## CROSS BAR PAD

This new Cross Bar Pad protects the rider against injury resulting from hitting the cross support of moto cross style handlebars. The pad snaps on in seconds to any motorcycle handlebar that is equipped with a cross bar. The Cross Bar Pad is padded with shock absorbant "cushioned foam rubber," and it is covered with durable heavy grain black vinyl.

The 12-inch pad retails at \$3.95, and an 8-inch pad for mini-bikes and narrower bars retails at \$3.25 (California residents please add 5% tax). The Cross Bar Pad is available from, CC Products, P.O. Box 96, Dept. MC, Rialto, California 92376.



## BIG-BORE KITS

For those who want to add more power to their Honda Mini, there is a Big-Bore kit from Powroll Performance Products. Bolt-on kits include everything needed to enlarge the bore and subsequent power output without compromising Honda reliability.

Carefully engineered Big-Bore kits can turn Honda 50's (or 65's), into a fire-breathing 75cc or 82cc high performance machine. Each kit contains a new cylinder, piston, rings, pin, and Teflon pin retainers along with a special head gasket. Kit price F.O.B. Bend, Oregon, is \$37.50 for the 75cc and \$49.00 will buy you the 82cc kit.

A catalog of high performance products for Honda 50's through Honda 70's is available for 50¢ from, Powroll Performance Products, Inc., P.O. Box 926K, Dept. MC, Bend, Oregon 97701.





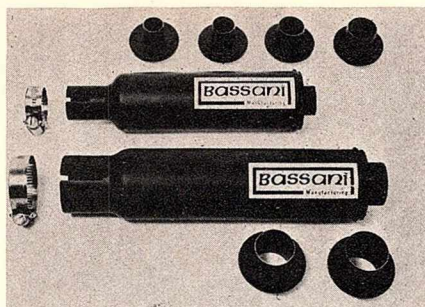
### IMPROVED GOGGLES

Most riders wear both a helmet and goggles—which has presented a minor problem until now. From time to time a rider wants to be able to remove his goggles while leaving his helmet on. The obvious solution has been to wear the goggles with the strap around the outside of the helmet. But this method has the disadvantage of allowing air to leak in at the sides of the goggles.

Now, Hercules Distributing has a simple solution—instead of joining the elastic strap directly to a slot in the goggles, the strap is attached to hinged holders mounted on the sides of the goggles, worn with the strap outside the helmet with no annoying air leaks.

The goggles are presently offered in two styles. Both also have softer, thicker foam liners for greater comfort. They come with clear, smoke or yellow lenses, and replaceable lenses are available.

If your dealer doesn't have the new-style Hercules goggles, ask him to order for you from, Hercules Distributing Ltd., 9825 Mason Avenue, Dept. 20, Chatsworth, California 91311 (wholesale only).



### FOR MINIS

Originally designed for high performance competition motorcycles the Bassani tuned silencer is now available for all mini-bikes and other small engines.

Quiets noisy exhaust and gives two-cycle and four-cycle engines. The exhaust silencers feature a matched inner core and special fiberglass packing. The seamless steel outer housing is guaranteed unbreakable!

One for each exhaust pipe, sizes from 3/4" o.d. to 1 3/4" o.d. (specify size when ordering). Includes mounting clamp, \$12.00 post paid on prepaid orders. Extra fiberglass packing kit \$.50. For additional information send \$.50 to, Bassani Manufacturing, 1117 Fountain Way, Dept. MC, Anaheim, California 92806.

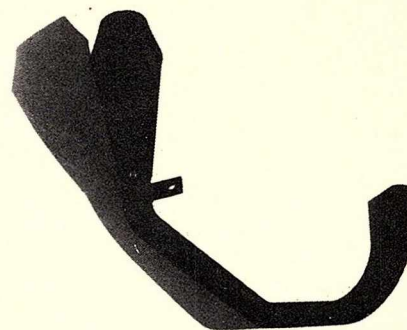
### HELP THE SPORT

With virtually nothing to lose, except ear-splitting cacophony, and everything to gain, including the salvation of the sport in some areas, the move to quiet motorcycle competition was a natural and necessary step by the American Motorcycle Association's Competition Congress.

In an effort to assist its clubs and individual members in implementing the noise ruling, the AMA, through special agreement with T&T Products is making available a high quality sound level meter at a special rate of \$81.50, amounting to nearly 20 percent off the regular price of the meter.

Special features of the sound meter include both slow and fast dampening rates, input for a remote microphone and battery checking circuitry. Batteries are included and are guaranteed for one year under normal use.

With increasingly restrictive legislation currently being consider-



### HONDA MEGAPHONE

Cycle Products West is now offering an inexpensive bolt-on exhaust modification for the Honda SL-70, SL-100, and SL-125. These Reverse Cone megaphone pipes improve the wide power band of these small bore Hondas.

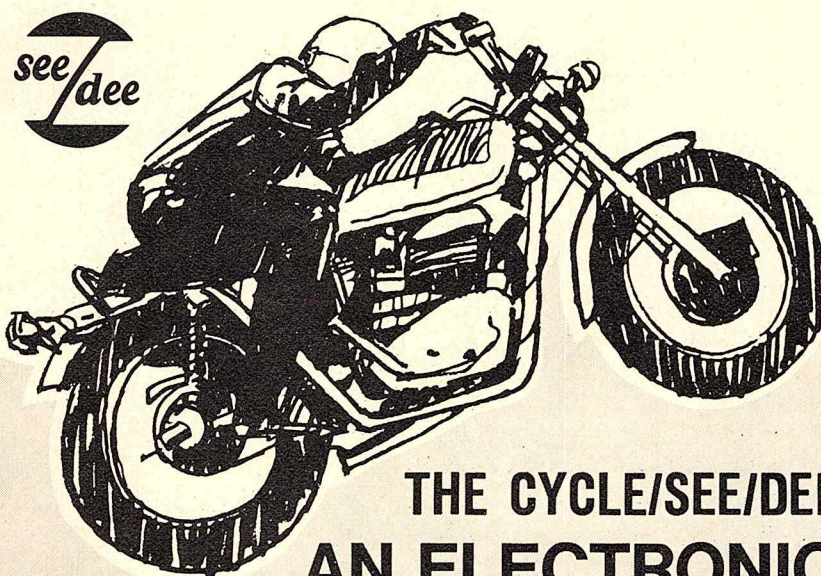
The new bolt-on pipe sells for \$24.95, and spark arrestors are available for \$17.95 along with silencers for \$14.95. Also available are pipes with built-in silencers for \$24.95.

For additional information please contact, Cycle Products West, 11900 West Pico Blvd., Dept. MC, West Los Angeles, Ca. 90064.

ed at all levels of government, it also represents a good investment in the future of the sport. Interested clubs and individual members may order sound meters by sending a check or money order for \$81.50 to Sound Level Meters, AMA Public Relations, P.O. Box 141, Dept. MC, Westerville, Ohio 43081. Also an AMA number or club charter number must accompany each order







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# NUTS AND BOLTS

Text continued from page 11

Dear Sir:

I have just bought a 1972 250 Yamaha Enduro. I am planning on using it in enduros and would like to know how to make it competitive. Would it be worth changing the stock 19 rim and tire to a 21, and, if so, alloy or steel rim and trials or knobby? What tire would be best on the rear, Full Bore or Barum and what size? What make shocks would be best, too? I could really use the information. Please! I really like your mag. Keep it up!

Bob Griffiths  
Duarte, Calif.

*Since you're from Duarte, California, which means you will be riding in dry sand and rocks, you should use a 3.50x19 front tire, preferably a trials universal pattern. Either Full Bore or Barum work good on back. I would suggest using larger than a 4.00 cross section tire.*

(Text continued from page 53)

ing, a cocktail glass ripped off ('Did you see his face when I walked off with the glass?'). Small thing, but by next year it will be told as the time the motorcycle-types broke up the place. Like soldiers, we tend to act up a bit when we're in a strange town.

Significant event number two occurred somewhere between 5:30 and 6:00 p.m.; a successful landing at LAX. Another hour of freeway and then some time to reflect. It had been a good program. Well planned, nicely executed, informative, and a pleasant respite from riding and writing.



# EUROPE

Text continued from page 26

works AJS whilst trying out two of the works jobs at the factory practice motocross course and is in the hospital with a broken thigh and fractured wrist so he never joined Blackwell at the British motocross at Newbury. We wish him a speedy recovery! This is particularly bad luck as Grant was only just recovered from a broken ankle.

With the limited supply of JAP speedway engines and the big demand for the Czech ESO (a Jawa CZ product) due to the increasing use of these in short track and speedway racing, replacements are a serious problem for riders with delivery promises over a year ahead. Several top line riders have made an approach to BSA on the possibility of them producing a unit, but this firm is naturally cagey in answering until output quantities can be justified. BSA's past financial troubles have been due to incorrect evaluation of marketing potential. It is a strange reflection on the British motorcycle industry that today it is impossible to buy a home-produced cycle for street use of less than 500cc capacity. This has, of course, handed the great part of sales to the Japanese. Now there is talk of the BSA/Triumph combine re-introducing 250cc and 350cc bikes.

With suspension threats to riders who receive three bookings in a season for machines exceeding a laid down exhaust noise limit, at last serious attention is being given to the problem by manufacturers who are the real culprits, although the rider of his product is the sufferer (provided he has not altered the stock exhaust system). AJS works rider Vic Eastwood has possibly the quietest MX bike in circulation and he is still winning, so no loss of power has resulted from his exhaust modifications. His AJS firm has arranged to import the U.S. Xdusor two-stroke silencer, and not only for their own AJS but they list a range which will fit any known make of motocross bike.

Unfortunately, there seems no agreement that the noise problem should be dealt with on an International basis as witness the mockery of the British noise limit regulations when an International Motocross is held in this country. For these occasions unsilenced bikes may be used which is pandering to the visiting European contestants. It was as long ago as March, 1968 that the British governing Auto-Cycle Union issued its list of approved silencing systems after each type had been officially tested, but little action has been taken over the ensuing years.

## TRIP-OUT T-SHIRTS in full color



VILLAGE DRUNK



BOONE'S FARM



U.S. NAVY



U.S. ARMY



JUST PASSING THROUGH



COORS BEER



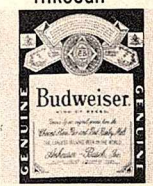
HARLEY 74



MONKEY ROUND



DIRTY OLD MEN



BUDWEISER

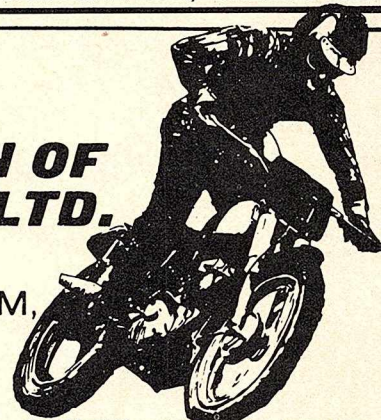
The wildest, funniest, T-shirts you've ever seen. They are funny, serious, sexy and real. Order now at this special low price and get FREE our giant new catalog with hundreds of 'IN' things. American made, all cotton. Sizes Small — Medium — Large — Extra Large. \$3.00 each plus 50¢ for postage and handling to:

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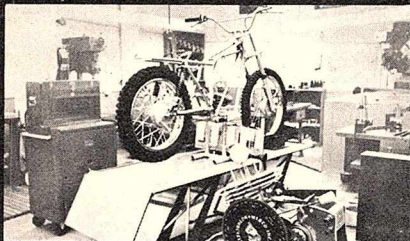


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Webco is one of the few manufacturers in the motorcycle industry to operate a fully equipped dynamometer facility.



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Daniel Webster defines "know-how" as: "the knowledge of how to do something or technical skill". The know-how that goes into Webco accessories is second to none. Not a newcomer, Webco has spent many years in accumulating the knowledge that it takes to make a better product.

Trial and error, methodical testing, objective evaluation . . . these are the all-important ingredients in our development process. Webco's ultra-modern R & D facility is known to be the standard of the industry. When you buy a Webco product, you get more than just a product.

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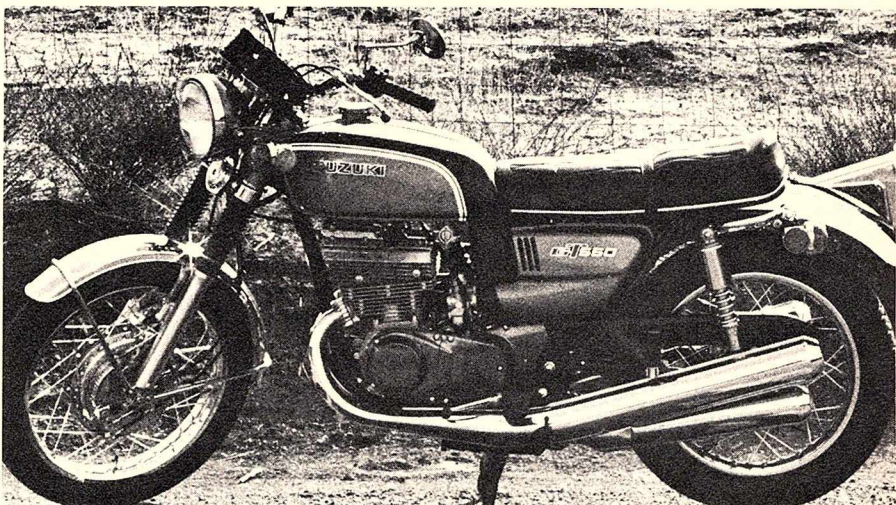
Distributed in the Midwest by  
KK MOTORCYCLE SUPPLY

# SUZUKI

few years ago a four leading shoe brake such as this would be found only on a few exotic racing machines. To their credit as stoppers these brakes are still being used, in fact preferred by some racers. The 550 brake does what might be expected of it and pulls the motorcycle down with great authority. It's fitted with hard lining which is often noisy but very efficient when hot. While a softer lining may seem better suited to casual transportation riding, in

head shaking. As might be expected, the 550 ignores body english and responds best to steering combined with pronounced lean.

Our third and final quarrel with the Suzuki may be inherent, or it may just plague this particular unit. The transmission is prone to hang in first gear with no degree of predictability and for no apparent reason. It has happened during both normal and hard acceleration, with the engine cold or hot, sometimes two and three



that it requires less lever pressure, thought must be given to the consequences of all four shoes energizing with soft, grabby lining. Suzuki's choice of a hard lining is good and the only time the front brake is less than satisfactory is when it is used to prevent the motorcycle from rolling backward, downhill.

The rear brake is another matter. It's as bad as the front is good. Its single leading/single trailing shoe arrangement does little to retard forward motion with anything short of massive pedal pressure. One quickly learns to place full trust in the front brake and use the rear unit only as augmentation—wholly a disquieting situation for the use this motorcycle will be put to.

More grievous a fault than the rear brake is the handling of the 550. At low and moderate speeds it handles imprecisely, feeling as though it wants to fall down. Our first impression was that something up front was loose, like the head crown, but a careful inspection indicated that all was correct. High-speed handling is little better. The front end tends to hunt at steady throttle settings. Removing the hands from the bars permits a disquieting but non-violent

times in a row, and then again not for a dozen or so trips through the gears. Clutch adjustment appears to be correct, but obviously all is not right in the gearbox. More's the pity because the transmission is otherwise splendid with easy, consistent selection throughout the rest of the range, and well chosen ratios.

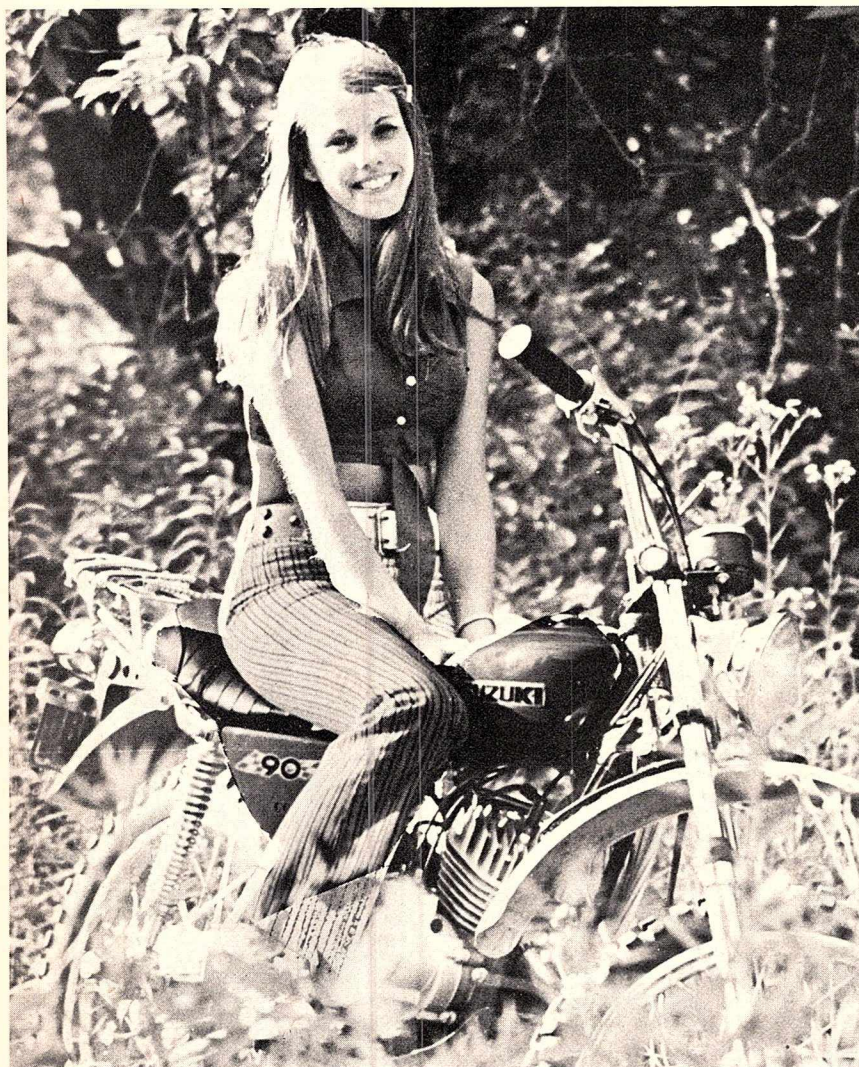
Despite its flaws we liked the 550 very much. The engine is exceptional—well mannered and hairy chested all in one neat package. Styling and finish are as good as anything on today's market. Low operating noise and the absence of smoke make it a welcome addition to virtually any neighborhood. But the poorly balanced braking scheme, the reluctant first gear and heavy, unsure handling knock it down far short of its potential. To be sure these are correctable faults but that shouldn't be part of ownership. We won't hazard a guess as the cost of this remedial work but experience tells us that it would be substantial. We sincerely hope that Suzuki will see fit to incorporate corrections in future production units, for there's a whale of a lot of pleasure waiting in this package that is spoiled by some flaws that just can't be shrugged off. ●



# MISS M.C.

Got a pretty gal and a good looking motorcycle? Put the two together in the best photo you can take and enter it in the Miss Modern Cycle competition, a regular feature in every issue. Photos should be clear glossy black and white prints at least 4" x 5" in size.

If your photo is one of these chosen for use in the magazine, you'll receive five dollars and a one-year subscription to **Modern Cycle**.



This month's Miss Modern Cycle is a pretty young lass by the name of Miss Mary Ann Hogue. The winning photograph was taken by Andy Doukas of Oxford, Ohio. We can only assume that Miss Hogue is also from Oxford. As Andy stated in his letter, "Both the bike and the girl are hot stuff!" For sending in the winning entry, Andy Doukas receives a check for \$5.00 and a free one-year subscription to **Modern Cycle Magazine**.

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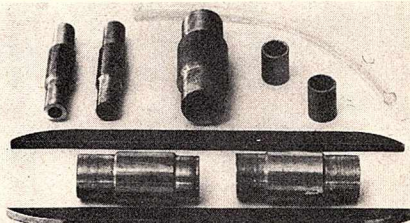
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# NOSE -TO- NOSE

Text continued from page 25

practice, it's sound, trouble free, and lasting.

The SL's frame is a bit unusual. Over the years there has been a lot of adverse comment about steel stampings welded together to make up this major component of a motorcycle. The main section of the SL frame is a couple of steel stampings welded together to make up a backbone section. From this piece are welded steel tubes that form a rear section and also a double cradle that runs under the engine cases, up past the backbone, and tie into the steering head above. The three pieces form a triangulation at the steering head producing a rigid design.

Honda's telescopic forks use wipers, a style introduced by Ceriani of Italy and widely copied by everyone else. The telescopic forks have 5.7 inches of two way hydraulic controlled dampening and are fitted with seals that just plain don't leak. The rear units have 3.3 inches of travel and are perfectly balanced to the telescopes up front, they did a good job of matching the suspension units to one another.

The SL-125 is comfortable for either standing or sitting. Bars, seat, and footrest locations are correct for an off-road bike and their relative levers and pedals are also well positioned. Fitted with a primary-type kickstarter, you don't need to find neutral to start the thing, just pull in the clutch.

As an enduro machine it falls short in one category as far as necessary equipment, the speedo. Being a front wheel driven device is correct but having the odometer trip reset in clumps rather than a tenth at a time renders the instrument useless as far as the serious enduro rider is concerned. A tachometer sets up next to the speedometer, and although utterly of no use at all for this very mildly tuned engine, I guess it attracts some people.

With special goodies like a locking fork and a place to lock up your helmet, the SL has got a whole lot to offer. Among these is a chafed shin bone when you don't clear that dumb reflector mounted on top of an already too high and too large taillight every time you swing your leg over. •

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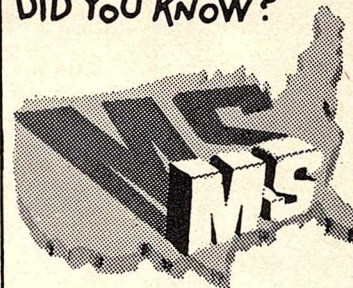
The winner in this month's Action Photo Contest is Wiley Williams of "Big D," Dallas, Texas. Wiley captured the unfortunate endo victim Lensy Harper in the above photo at the Stemmons Motocross Park. It was noted that Lensy continued on over the bars and remarkably was not badly injured. For sending in this winning entry, Wiley Williams receives a check for \$5.00 and a free one-year subscription to **Modern Cycle Magazine**.



Here's your chance to win a five-dollar bill plus a year's subscription to **Modern Cycle** simply by sending in a good action photo involving any two-wheeled motor vehicle. For each photo we use, we will pay you \$5.00 and a one-year subscription. Photos should be clear glossy black and white prints at least 4" x 5" in size. On a separate sheet of paper give us as much information as you can concerning the photo. Send your entries to: Action Photo Contest, **Modern Cycle Magazine**, 7950 Deering Avenue, Canoga Park, California 91304.

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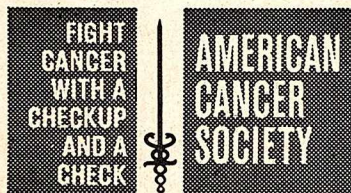
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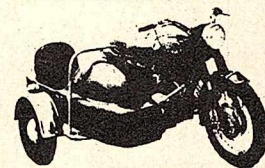
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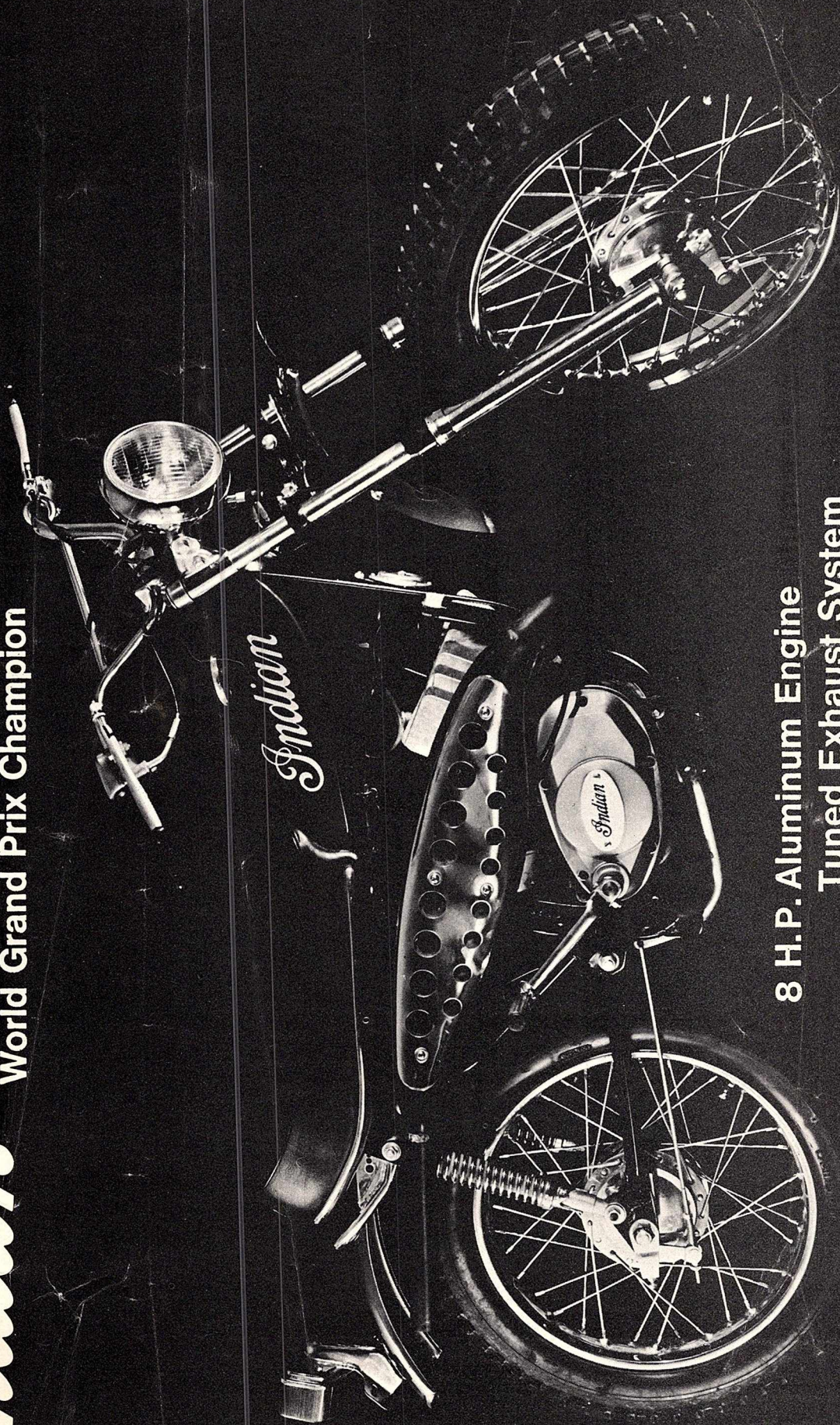
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